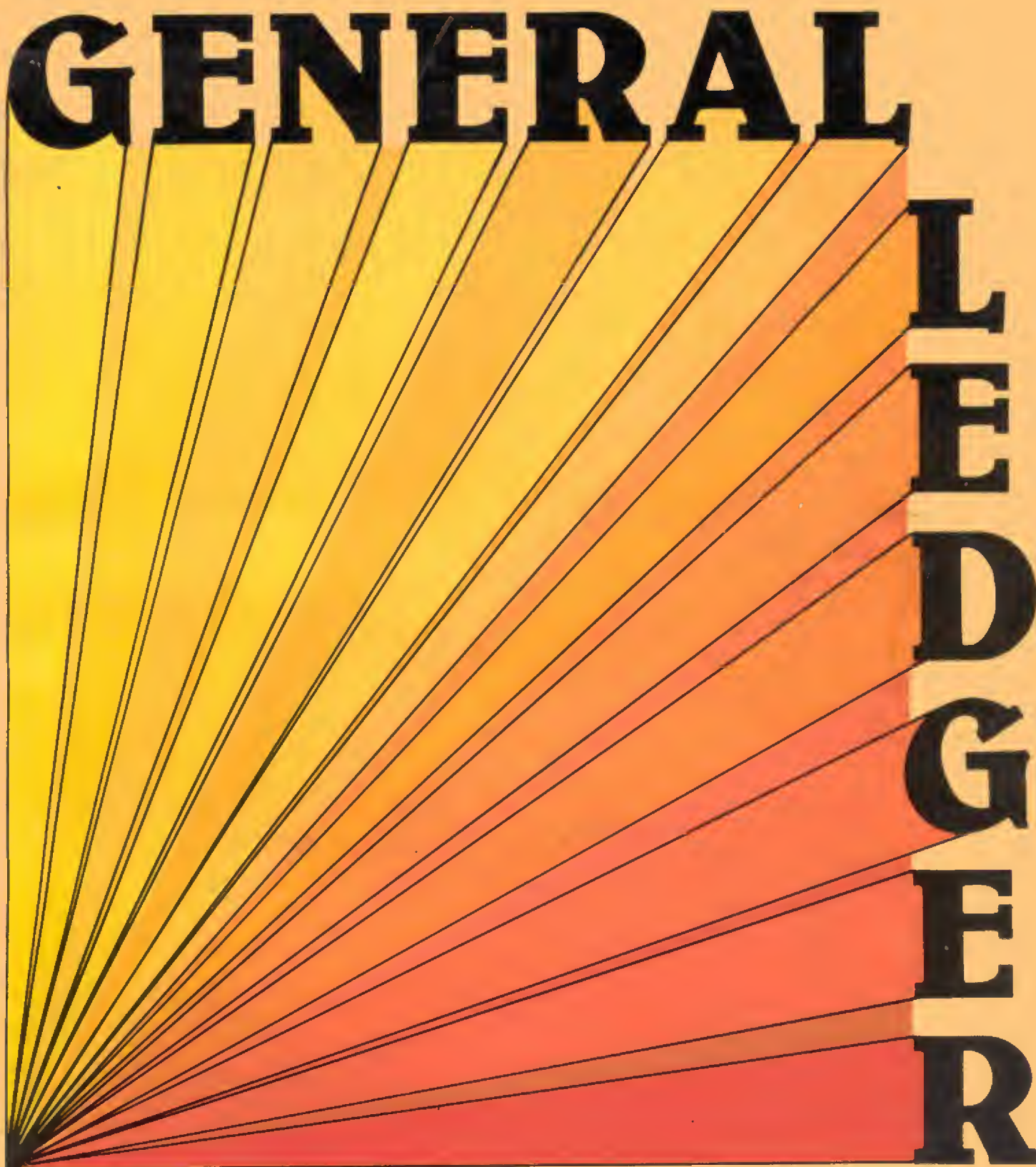


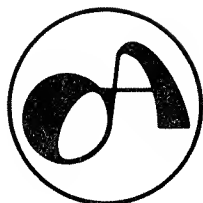
 **OSBORNE & ASSOCIATES**

GENERAL LEDGER



By LON POOLE • MARY BORCHERS

GENERAL LEDGER



BY
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INTRODUCTION

You can now buy a computer for a few thousand dollars that is just as powerful as one that cost ten or twenty times as much just a few years ago. Today's inexpensive computers can certainly handle most of the accounting chores of any small business. But the computer itself is only part of a total automated accounting system. The other part is a set of programs that tell the computer what to do. In the days when computers themselves were very expensive, programs that were fairly expensive still constituted only a small part of the price tag for a complete automated accounting system. Today, the programs can easily cost a small business as much as the computer itself. Until recently, this has been a problem with no solution. This book is part of the solution.

This is one in a series of books published by Osborne & Associates that provides complete source listings and documentation for business data processing programs. This is not another book on how to write computer programs; the programs are already written. The book includes source listings for ten programs written in the widely used computer programming language BASIC.

These General Ledger programs are a direct result of Osborne & Associates' five years of experience serving as software consultants to small and medium-sized businesses. We developed these programs on a Wang Laboratories 2200 minicomputer, so the listings in the book are in Wang Laboratories extended BASIC. The programs have been installed, user-tested, and updated over the years so that they are now basically error-free.

CONTENTS

Most of this book is devoted to extensive system and program documentation. The first chapter provides an overview of the General Ledger system structure and philosophy. It analyzes program capabilities, limitations, and flexibilities. Chapter 2 describes data file structure, including file content, uses, and accessing methods. Chapter 3 is a guide to managing your General Ledger using the programs in this book. It discusses what the programs do, how they interrelate, and when to run each one. Chapter 3 also correlates this General Ledger system with the Accounts Payable/Receivable systems presented in the Osborne & Associates publication *Accounts Payable and Accounts Receivable*. Chapter 4 is a complete user's guide with step-by-step instructions for operating each program, sample CRT screens, sample printouts, and a description of how each program works.

Chapter 5 describes some special features of Wang Laboratories extended BASIC. **Unless your BASIC is compatible with Wang extended BASIC, you will have to convert the programs to your BASIC.**

While you are changing the programs to be compatible with your BASIC, you will probably want to customize them so they match your accounting procedures more exactly. Chapter 6 discusses some of the ways you can do this.

Chapter 7 contains the specific information you will need to install the General Ledger programs. It provides details on file initialization and CRT display layouts. It also includes step-by-step operating instructions for a utility program to set up CRT masks.

The source listings occupy the last third of this book. Comments (REMARKs) on specific program lines appear in the margin next to the listings. Also, you will find computer-generated cross-references showing where the line numbers, variables, and subroutines are used in each program.

A programmer installing the General Ledger system should read the entire book. Non-programmers who need to know how the programs interrelate and how to operate each program can read just Chapters 1, 3, and 4. Those who only need to know how to operate the programs can read just Chapter 4.

OTHER BOOKS IN THIS SERIES

This book refers to two of the other books in the BASIC program series published by Osborne & Associates. *Payroll With Cost Accounting* contains complete source listings and documentation for a Payroll system with labor distribution cost accounting. *Accounts Payable and Accounts Receivable* contains complete source listings and documentation for Accounts Payable/Receivable reports and account maintenance.

PUBLICATION ERRORS

The programs in this book have been in daily operation for several years. Additionally, they were thoroughly tested prior to publication, so they should be error-free. Still, there is no way to prove any computer program has no errors. **If you find any errors in the program source listings or any other part of this book, please send a written description to the authors, in care of Osborne & Associates, at the address printed on the back cover of this book. Please include a description of your correction, if you have one.**

HOW THIS BOOK HAS BEEN PRINTED

Notice that text in this book has been printed in both boldface type and lightface type. This has been done to help you skip those parts of the book that cover subject matter with which you are familiar. You can be sure that lightface type only expands on information presented in the previous boldface type. Therefore, read only boldface type until you reach a subject about which you want to know more, at which point start reading the lightface type.

Chapter One

SYSTEM CAPABILITIES

Put all of the programs listed in this book together and you will have a complete computerized General Ledger system. It performs most of the tasks normally associated with computerized versions of General Ledger. You will notice that there is not just one program to perform these tasks. That is because we split up the tasks so that each program performs only part of the overall processing. You can still think of these programs collectively as one large, multi-faceted General Ledger program. In fact, you could even implement them as one program if you had enough computer memory. However, most small computers do not have enough memory. That is why we have divided the tasks among different programs. **Figure 1-A gives an overview of General Ledger. Table 1-B lists the individual programs.**

There is one program, Menu, that just controls which of the tasks will be performed. You select the task you want from a numbered list displayed by the Menu program, and it loads and executes programs to perform the task you selected. When the selected program finishes its processing, it reloads the Menu so you can choose another task. This technique of using a controller program makes General Ledger look very much like one large program — at least to the person operating it.

Whenever you start up the General Ledger system, you will have to correctly enter a password before you can proceed with task selection. This protects the General Ledger from accidental or malicious tampering.

The General Ledger accepts postings to the various accounts from three external sources: Payroll, Accounts Payable, and Accounts Receivable. You can also enter postings directly. This allows you to adjust erroneous postings from external sources, and to make postings to accounts normally unaffected by Payroll, Accounts Payable, or Accounts Receivable. Please note that the Accounts Payable/Receivable programs described in the Osborne & Associates publication *Accounts Payable and Accounts Receivable* generate postings to the General Ledger described in this book, but the Payroll programs described in the Osborne & Associates publication *Payroll With Cost Accounting* do not.

In the final analysis, the financial statements are what a General Ledger is all about. **With the programs in this book, you can format your own balance sheet and income statement.** You have complete freedom to place titles and headings where you want them, skip lines or pages between accounts, and generate subtotals and totals throughout the reports — up to ten levels if you need them. You can print the balance sheet and income statement for the current month, current quarter, or any of the previous three quarters. This year's or last year's totals are also included on the income statement. They do not appear on the balance sheet, since balance sheet account totals are by nature running totals, hence yearly totals.

In addition to the balance sheet and income statement, you can print a trial income statement and trial balance. There is also a special report that lists the current account balance for selected accounts.

Table 1-B. General Ledger Programs

| Number | Name |
|--------|--|
| 0 | Menu -- Choose which of the General Ledger programs you wish to run. |
| 1 | General Information File Maintenance -- Change today's date, the company name, company address, or fiscal year. |
| 2 | Direct Posting -- Enter postings to any account. Optionally print direct postings. |
| 3 | Posting Update -- Update General Ledger accounts with external postings and direct postings. |
| 4 | Reports -- Print the trial income statement, trial balance, income statement, balance sheet, or special report. Also move totals at end of month, quarter, or year. |
| 5 | Account File Maintenance -- Add new accounts. Change account name, report parameters, totals, etc. |
| 6 | Account File Reorganize -- Recover wasted space caused by record deletion in the Account file. |

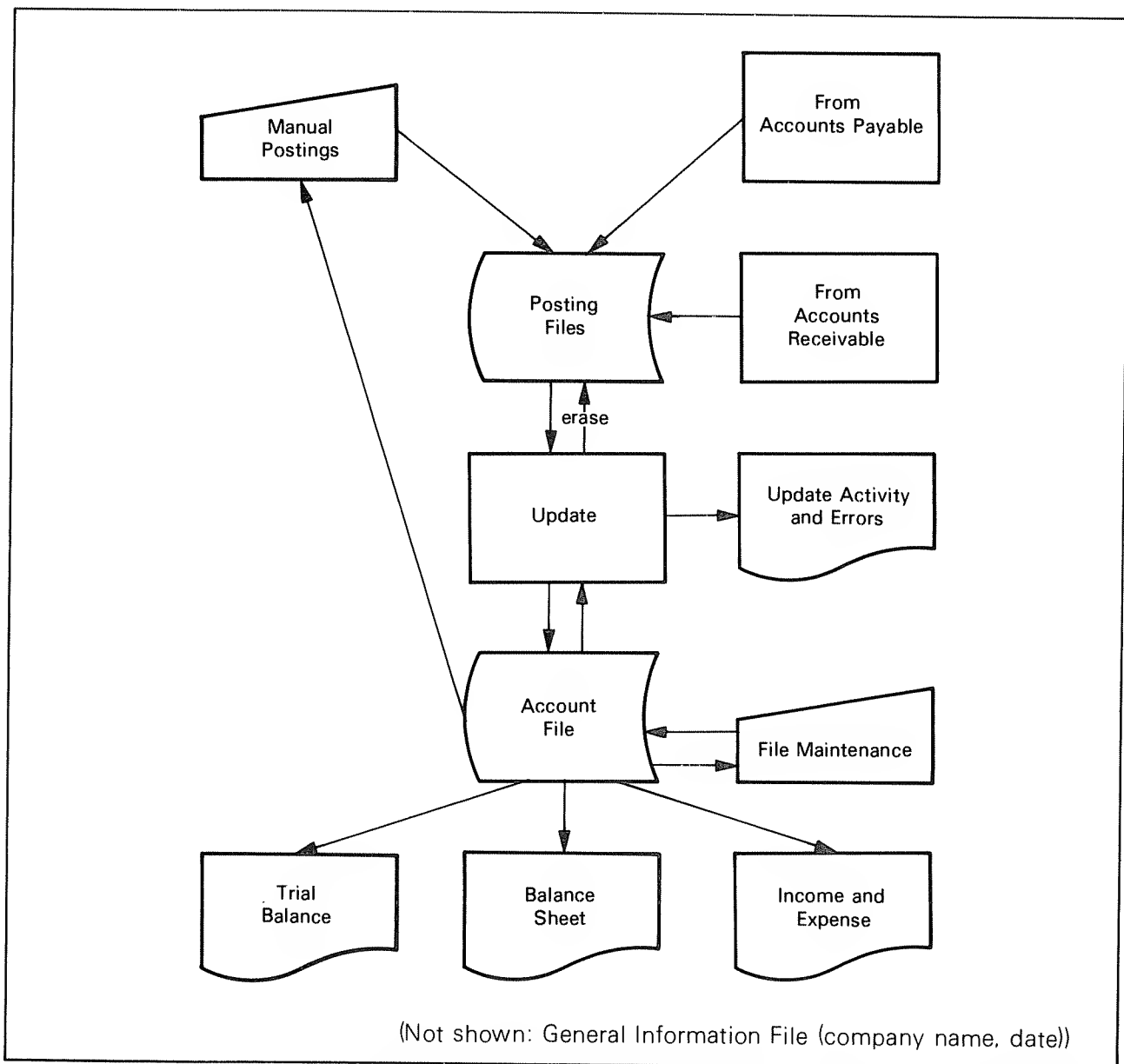


Figure 1-A. General Ledger System

Chapter Two

DATA FILES

All General Ledger data is organized into a hierarchical structure composed of fields, records, and files. A field is any single data item, a record is a group of fields that are related to one subject, and a file is a collection of like records. For example, individual data items such as Account Number, Account Name, and Monthly Total are some of the fields in an Account record, and all the Account records taken together comprise the Account file.

General Ledger expects its data files to be stored on some kind of random access storage device, such as a disk drive. Tape cassettes and other sequential storage media will not work.

Data is transferred to and from the disk in complete records, one record at a time. To use a particular field, you must load the entire record that contains it. For example, to obtain an account's Monthly Total field you must load the entire Account record from the Account file into the computer's memory. You can then extract the monthly balance from the Account record to display it, print it, etc.

FILE ACCESSING METHODS

There are several ways to locate a specific record within a file. The General Ledger programs use sequential, random, and keyed (indexed sequential) file accessing methods. In many cases, file accessing begins with the first record on the file, proceeds to the second record, then to the third, and so on to the end of the file. This is called sequential file accessing.

Sequential accessing is inadequate for many files. You may need records in a random order; perhaps you will access record 1, then record 25, record 23, and finally record 26. Since a disk can jump around, locating records randomly, limiting the disk to strict sequential accessing makes no sense. Given a record's relative position within a file, the disk can compute the location of the record from the beginning of the file, position itself to that location, and load the desired record into the computer memory. This is called random accessing. When using random accessing, you must either know or be able to arithmetically compute a record's location. Unfortunately, this is not always possible.

There are several ways you can find a record if you do not know its position within a file. Every one of these methods requires each record to be identifiable by a unique code or key. Usually, you will decide that some field or group of fields in the record will form the key. For example, the Account Number field could be the key for the Account file. You can access records by their keys even if the records are completely unordered within the file. One way of doing this is by keeping a separate table of keys to use as a file index. Each entry in the index contains a key, along with the position of that key's record within the file. To access a record, find its key in the index. The accompanying record position points to the actual location of the data record on the disk. We call files that are accessed this way keyed files, and the procedure for accessing them is called keyed file accessing. This type of accessing is sometimes called Indexed Sequential Accessing Method (ISAM).

FILE DESCRIPTIONS

Table 2-A lists the data files used by General Ledger. The description given for each file includes a summary of the file's contents and uses and any special notes that are pertinent.

Table 2-A. General Ledger Data Files

| Number | Name | Description | Accessing Methods |
|--------|----------|--|--------------------|
| 1 | G/LOF110 | Account — This file contains the account name, various account type parameters, and account balances | keyed |
| 2 | G/LOF020 | External Posting — This holds postings to the General Ledger from Accounts Payable, Accounts Receivable, etc | sequential |
| 3 | G/LOF030 | Direct Posting — This holds postings entered from General Ledger to adjust errors in external postings, etc | sequential |
| 4 | G/IOF010 | General Information — The first record in this file contains today's date and some data used by the Payroll programs described in the Osborne & Associates publication <i>Payroll With Cost Accounting</i> . The second record on this file contains the company name, address, etc | sequential, random |
| 5 | CRT3 | CRT Mask — Each record on this file contains the field labels, descriptions, and explanations that are displayed on the CRT screen and are used as a template for guiding data entry in some programs | random |

FILE LAYOUTS

File layouts describing the exact record format for each file used in General Ledger are presented on the following pages. Each layout contains the following items:

DESCRIPTION — The name used to identify the file in this book.

FILE NAME — The name the programs use to identify the file

UNIT — The address or name of the disk on which the file resides.

NO. OF RECORDS — The number of records in the file.

RECORD SIZE — The number of bytes or characters each record occupies, excluding control bytes added by the computer.

BLOCKING — The number of records in one sector or the number of sectors each record takes, whichever applies.

KEY SIZE/POSITION — The number of bytes the key occupies in the record and its relative position from the start of the record, including Wang format control bytes.

All data is loaded and saved via alphanumeric variables (often arrays). Numeric values are packed into the alphanumeric variables in binary coded decimal (BCD) format. Thus numeric values are stored without spaces, excess trailing or leading zeros, or other cosmetic parts that do not affect the value of the number.

Each field in a record is listed on a separate line of the file layout. The variable name that the programs use to refer to it, its description, and its size are shown. If the field size is prefixed with an A, the field is alphanumeric, with the maximum length specified by the integer suffix. If the field size is prefixed with an N, the field is numeric and the number suffix gives the PACK/UNPACK image. For example, -N9.2 means nine pre-decimal digits and two post-decimal digits. The minus sign means a positive or negative number can be packed. Any number between -999,999,999.99 and 999,999,999.99 can be packed in a -N9.2 image. A -N9.2 field requires six bytes of disk space (each digit takes one-half byte, with one-half for the sign).

With few exceptions, we have left the number of records in a file up to you. There are several things to consider when you are establishing the file sizes. The storage capacity of your disks will impose a practical limit on file sizes. In addition, your computer will only be fast enough to handle a limited number of disks. There is a more detailed discussion of file size factors in Chapter 7.

A program and data file cross-reference table (Table 2-B) shows which data files are accessed by each program, and how the data files are used.

Table 2-B. Program/Data File Cross Reference

| | | | | | | |
|---|---|---|---|---|---|---|
| DATA FILE | | | | | | |
| 1. ACCOUNT | | | | | | |
| 2. EXTERNAL POSTING | | | | | | |
| 3. DIRECT POSTING | | | | | | |
| 4. GENERAL INFORMATION | | | | | | |
| 5. CRT MASK | | | | | | |
| PROGRAM | | | | | | |
| 0. MENU | R | | | | | |
| 1. GENERAL INFORMATION FILE MAINTENANCE | R | U | | | | |
| 2. DIRECT POSTING | R | R | U | R | R | |
| 3. UPDATE | | R | U | E | U | U |
| 4. REPORTS | R | R | R | R | U | |
| 5. ACCOUNT FILE MAINTENANCE | R | R | | | U | |
| 6. ACCOUNT FILE REORGANIZE | | | | | U | |
| | 5 | 4 | 3 | 2 | 1 | |
| R – READ E – ERASE U – UPDATE | | | | | | |

FILE LAYOUT

| FILE NO. | DESCRIPTION | | | | | PAGE |
|---------------------------------------|-------------------------------|----------------|-------------|---------------------------|-------------------|--------|
| 1 | ACCOUNT | | | | | 1 of 1 |
| FILE NAME | UNIT | NO. OF RECORDS | RECORD SIZE | BLOCKING | KEY SIZE/POSITION | |
| G/LOF110 | B10 | You decide | 103 | 1/sector | 4/3 | |
| MISCELLANEOUS COMMENTS | | | | | | |
| Key is Account Number field (packed). | | | | | | |
| VARIABLE | FIELD DESCRIPTION | | SIZE | COMMENTS | | |
| L\$ | Misc., packed as follows: | | A42 | | | |
| L1 | Account Number | | N5.1 | | | |
| L2 | Sub-account Number | | N2 | | | |
| L3 | Account Type | | N1 | 0 = Regular | | |
| L1\$ | Account Name | | A31 | 1 = Title | | |
| L4 | Report Type | | N1 | 2 = Total | | |
| L5 | Normal Balance | | N1 | 3 = Heading | | |
| L6 | Total Level | | N1 | 1 = Income Stmt | | |
| L7 | Extra Line Advance | | N1 | 2 = Balance Sheet | | |
| L8 | Sales Account | | N1 | 1 = Debit; 2 = Credit | | |
| L9 | Include on Special Report | | N1 | 0 - 9 | | |
| | | | | 0 - 8 Lines; 9 = New Page | | |
| | | | | 0 = No; 1 = Yes | | |
| | | | | 0 = No; 1 = Yes | | |
| D\$ | Misc., packed as follows: | | A60 | | | |
| D(1) | This Month Total | | -N9.2 | | | |
| D(2) | This Year Total | | -N9.2 | | | |
| D(3) | This Quarter Total | | -N9.2 | | | |
| D(4) | First Previous Quarter Total | | -N9.2 | | | |
| D(5) | Second Previous Quarter Total | | -N9.2 | | | |
| D(6) | Third Previous Quarter Total | | -N9.2 | | | |
| D(7) | Previous Year Total | | -N9.2 | | | |
| D(8) | Unused | | -N9.2 | | | |
| D(9) | Unused | | -N9.2 | | | |
| D(10) | Unused | | -N9.2 | | | |

FILE LAYOUT

| | | | | | | | |
|---|-------------------------------|---------------------------------|-------------------|--|--------------------------|----------------|--|
| FILE NO. 2 | | DESCRIPTION EXTERNAL POSTING | | | | PAGE 1 of 1 | |
| FILE NAME G/LOF020 | UNIT B10 | NO. OF RECORDS 3600 Max. | RECORD SIZE 14 | BLOCKING 16/sector | KEY SIZE/POSITION N/A | | |
| MISCELLANEOUS COMMENTS The size of this file plus the size of G/LOF030 must be less than 3600 records. | | | | | | | |
| VARIABLE | FIELD DESCRIPTION | | SIZE | COMMENTS | | | |
| G\$(1-16) | Misc., packed as follows: | | A14 | | | | |
| P1 | General Ledger Account Number | | N5.1 | <div><div></div><div>0 = Payroll</div><div>1 = Accounts Payable</div><div>2 = Accounts Receivable</div><div>3 = General Ledger</div></div> | | | |
| P2 | Source Code | | N2 | | | | |
| P3 | Date (Month and Day) | | N2.2 | | | | |
| P4 | Reference | | N6 | | | | |
| P5 | Amount | | -N7.2 | | | | |

FILE LAYOUT

| | | | | | |
|---|-------------------------------|------------------------------|-------------------|--|--------------------------|
| FILE NO. 3 | DESCRIPTION DIRECT POSTING | | | | PAGE 1 of 1 |
| FILE NAME G/L0F030 | UNIT B10 | NO. OF RECORDS You decide | RECORD SIZE 14 | BLOCKING 16/sector | KEY SIZE/POSITION N/A |
| MISCELLANEOUS COMMENTS | | | | | |
| The size of this file plus the size of G/L0F020 must be less than 3600 records. | | | | | |
| VARIABLE | FIELD DESCRIPTION | | SIZE | COMMENTS | |
| G\$(1-16) | Misc., packed as follows: | | A14 | | |
| P1 | General Ledger Account Number | | N5.1 | { 0 = Payroll 1 = Accounts Payable 2 = Accounts Receivable 3 = General Ledger | |
| P2 | Source Code | | N2 ← | | |
| P3 | Date (Month and Day) | | N2.2 | | |
| P4 | Reference | | N6 | | |
| P5 | Amount | | -N7.2 | | |

FILE LAYOUT

| FILE NO. | DESCRIPTION | | | | | PAGE |
|---|---|----------------|-------------|------------|-------------------|--------|
| 4 | GENERAL INFORMATION | | | | | 1 of 1 |
| FILE NAME | UNIT | NO. OF RECORDS | RECORD SIZE | BLOCKING | KEY SIZE/POSITION | |
| G/10F010 | B10 | 2 | 129 | 1/sector | N/A | |
| MISCELLANEOUS COMMENTS One company record and one general system record are stored. (This is compatible with file G/10F010 in <i>Payroll With Cost Accounting and Accounts Payable and Accounts Receivable.</i>) | | | | | | |
| VARIABLE | FIELD DESCRIPTION | | SIZE | COMMENTS | | |
| G1\$ | Unused | | A9 | } Record 1 | | |
| G3\$ | Misc., packed as follows for system information, record 1 only: | | A24 | | | |
| | Today's Date | | N6 | | | |
| | Period Start Date | | N6 | | | |
| | Period End Date | | N6 | | | |
| | Payroll Number in Month | | N6 | | | |
| | Day Number in Payroll Period | | N6 | | | |
| | Unused | | A9 | | | |
| G1\$ | Misc., packed as follows for company 1: | | A9 | } Record 2 | | |
| G1 | Company Number | | N2 | | | |
| G2 | Next Check Number | | N6 | | | |
| G3 | Overtime Rate Multiplier | | N2.2 | | | |
| G4 | Hourly Rate | | N2.2 | | | |
| G5 | Fiscal Year Ends | | N2 | | | |
| G2\$(1) | Company Name | | A24 | | | |
| G2\$(2) | Company Address - Line 1 | | A24 | | | |
| G2\$(3) | Company Address - Line 2 | | A24 | | | |
| G2\$(4) | Company Address - Line 3 | | A24 | | | |
| G2\$(5) | Federal/State Tax Numbers | | A24 | | | |

FILE LAYOUT

| FILE NO. | DESCRIPTION | | | | | PAGE |
|---|-------------------|----------------|-------------|---------------|-------------------|--------|
| 5 | CRT MASK | | | | | 1 of 1 |
| FILE NAME | UNIT | NO. OF RECORDS | RECORD SIZE | BLOCKING | KEY SIZE/POSITION | |
| CRT3 | B10 | 5 | 1024 | 4 sectors | N/A | |
| MISCELLANEOUS COMMENTS | | | | | | |
| Masks are loaded and displayed four lines (i.e., one sector) at a time. | | | | | | |
| VARIABLE | FIELD DESCRIPTION | | SIZE | COMMENTS | | |
| X3\$(1) | Mask, Line 1 | | A64 | First Sector | | |
| X3\$(2) | Mask, Line 2 | | A64 | | | |
| X3\$(3) | Mask, Line 3 | | A64 | | | |
| X3\$(4) | Mask, Line 4 | | A64 | | | |
| X3\$(1) | Mask, Line 5 | | A64 | Second Sector | | |
| X3\$(2) | Mask, Line 6 | | A64 | | | |
| X3\$(3) | Mask, Line 7 | | A64 | | | |
| X3\$(4) | Mask, Line 8 | | A64 | | | |
| X3\$(1) | Mask, Line 9 | | A64 | Third Sector | | |
| X3\$(2) | Mask, Line 10 | | A64 | | | |
| X3\$(3) | Mask, Line 11 | | A64 | | | |
| X3\$(4) | Mask, Line 12 | | A64 | | | |
| X3\$(1) | Mask, Line 13 | | A64 | Fourth Sector | | |
| X3\$(2) | Mask, Line 14 | | A64 | | | |
| X3\$(3) | Mask, Line 15 | | A64 | | | |
| X3\$(4) | Mask, Line 16 | | A64 | | | |

Chapter Three

MANAGEMENT GUIDE

Before you can run the programs in this book, you must understand what they can do for you and what information they need from you in order to perform their function. Some programs gather information from you and store it in data files. Other programs interpret, combine, and transfer data between files. Finally, there are programs to extract the processed data from the files and report it back to you.

This chapter provides a general overview of General Ledger processing. It describes how the General Ledger programs work, including when and why you should run each program. It discusses some common errors and what to do about them. You should become familiar with the information in this chapter before attempting to run any programs using the detailed instructions in Chapter 4

MENU

A special program, called the Menu, controls the loading and execution of all General Ledger programs. You choose which program to run by specifying its identifying number in the Menu. Table 3-A shows the Menu's list of programs.

Table 3-A. Menu Program List

| | |
|----|--------------------------------------|
| 1) | General Information File Maintenance |
| 2) | Direct Posting |
| 3) | Posting Update |
| 4) | Reports |
| 5) | Account File Maintenance |
| 6) | Account File Reorganize |

SYSTEM DATE

As your first processing step every day, be sure to set the correct date using 1) General Information File Maintenance. Usually, you will set the date to today's date. You can use other dates for special effects like predating or postdating reports. For example, if today is January 2, you can still set the date to December 31 and run year-end reports (assuming the file still contains year-end figures).

SETTING UP THE CHART OF ACCOUNTS

The single most important aspect of automated General Ledger processing is setting up the chart of accounts. This is because the chart of accounts, contained in the Account file, determines what your financial reports will look like. Each account has a record in the Account file. The order of the Account records in the Account file establishes the order of account printing on the financial reports. There are special records in the Account file for report titles and headings. Account records determine where and when subtotals and totals will appear. Report spacing, extra blank lines, and skipping to the top of a new page are all controlled by information which you supply on each Account record. Thus you must consider the overall picture of your General Ledger reports when designing your chart of accounts and entering it into the Account file.

Let's take a step-by-step look at how you can carefully design a chart of accounts and implement it in your Account file. To start with, you or your accountant must draw up a chart of accounts suitable for your company. Table 3-B shows a sample chart of accounts. Notice that there are four categories of accounts: Assets, Liabilities, Income (or Revenue), and Expenses. Each of these categories contains a multitude of regular General Ledger accounts. The regular accounts are grouped together at different levels of detail. Table 3-B depicts this grouping by indenting account names at different levels.

Table 3 B. Sample Chart of Accounts

ASSETS

Current Assets

Cash

Revenue Bank

Petty Cash

Total

Accounts Receivable

Trade Accounts Receivable

Finished Goods Sales Receivable

Consulting Fees Receivable

Allow for Doubtful Accounts

Total

Employee Receivables

Other Accounts Receivable

Total

Inventory - Finished Goods

Finished Goods (at Mfg. Cost)

Raw Materials

Other Inventory

Total

Prepaid Expense

Prepaid Insurance

Prepaid Taxes

Other Prepaid Expenses

Total

Consulting

Contracts-in-Process

Direct Labor

Overhead

Other Direct Charges

Direct Materials

Outside Service

Freight - In

Travel

Total

Credits

Total

Total Current Assets

Deferred Production Costs

Direct Labor

Overhead

Other Direct Charges

Direct Materials

Outside Services

Freight - In

Total

Credits

Total

Property & Equipment

Cost

Machinery & Equipment

Furniture & Fixtures

Leasehold Improvements

Total

Construction-in-Process

Accumulated Depreciation

Machinery & Equipment

Furniture and Fixtures

Leasehold Improvements

Total

Total Property & Equipment

Total Assets

**LIABILITIES &
STOCKHOLDERS' EQUITY**

Current Liabilities

Notes Payable

Current Matur. on L-T Debt

Vouchers Payable

Sales Tax Payable

Income Tax Payable

Federal

State

Total

Payroll Taxes Payable

Federal Income Tax Withholding

FICA

Federal Unemployment Tax

State Income Tax Withholding

SDI

State Unemployment Tax

Total

Accrued Liabilities

Payroll

Vacation

Property Taxes

Other Accrued Liabilities

Total

Unearned Income

Customer Overpayments

Unidentified Customer Receipts

Total Current Liabilities

Long Term Liabilities

Notes Payable

Deferred Income Taxes Payable

Total

Stockholders' Equity

Capital Stock

Additional Paid-In Capital

Retained Earnings

Total

Total Liab. & Stockholders' Eq

INCOME

Sale of Goods

Finished Goods

Sales Returns & Allowances

Total

Consulting Fees

Royalties Income

Patent Royalties

Consulting Royalties

Total

Other Income

Collection of Bad Debts

Miscellaneous Income

Total

Total Income

Table 3-B. Sample Chart of Accounts (Continued)

EXPENSES

Cost of Income
 Cost of Sale of Goods
 Cost of Consulting Fees
 Royalty Payments
 Variance Expense
 Total

Development Project Expenses
 Direct Labor
 Overhead
 Other Direct Charges
 Direct Materials
 Outside Services
 Freight - In
 Travel
 Total

Total Development Proj Expense

Department Expenses

Salaries, Wages, & Benefits
 Direct Labor
 Indirect Labor
 Overtime Premium
 Holiday-Vacation-Sick Leave
 Jury Duty & Other Leave
 Payroll Taxes
 Bonus
 Other Fringe Benefits
 Total

Materials & Supplies
 Computer Materials and Supplies
 Raw Materials & Supplies
 Stationery-Matr'ls and Supplies
 Other Materials and Supplies
 Total

Facilities & Equipment
 Rent - Office Space
 Equipment Leases
 Depreciation
 Equipment Maintenance
 Janitorial Service
 Utilities
 Auto Expense
 Equipment Rental
 Total

Outside Services
 Professional Services - Legal
 Prof Services - Consulting
 Employment Service
 Credit & Collection Service
 Other Outside Services
 Total

Advertising
 Periodicals
 Trade Shows
 Shows - Travel
 Shows - Other
 Total

Direct Mailings - Samples
 Brochure Printing and Mailing
 Outside Prep. Work on Ads
 Other Advertising
 Total Advertising

Order & Shipping Expenses
 Shipping Expense - Outgoing
 Order/Shipping Forms Printing
 Postage
 Total

Other Expenses
 Taxes-Licenses-Fees
 Insurance
 Travel & Employee Business Exp
 Communications
 Doubtful Accounts
 Dues and Subscriptions
 Other Freight - In
 Allow'l Customer Underpayment
 Miscellaneous
 Total

Transfer in from Other Depts

Credits
 Direct Labor Transferred Out
 Overhead Applied
 Est O'head (Over) Under Absorbed
 Total

Total Department Expenses

Non-Operating (Income) Expense
 (Gain) Loss on Prop./Equip Sale
 Interest (Income) Expense
 Total

Estimated Income Taxes
 Federal
 State
 Total

Total Expense

In addition, there is a descriptive heading that precedes the first regular account in each group. Also, a group sub-total follows the last account in each group. For an example of this in Table 3-B, look in the Assets category under the Accounts Receivable heading. In this chart of accounts, Accounts Receivable is a "heading" account, not a "regular" account. It is broken down into three categories:

- Trade Accounts Receivable
- Employee Receivables
- Other Accounts Receivable

The last two accounts are themselves regular accounts, but Trade Accounts Receivable is another heading account consisting of three regular accounts:

- Finished Goods Sales Receivable
- Consulting Fees Receivable
- Allowance for Doubtful Accounts

There is a total of these three accounts following the last account, Allowance for Doubtful Accounts. There is also a total of the various Accounts Receivable accounts, which is the sum of the Trade Accounts Receivable total, the Employee Receivables account, and the Other Accounts Receivable account.

When you draw up your chart of accounts, be sure you specifically write down the various headings and totals that you want to appear on your financial reports, just as we have done in Table 3-B. Every printed line on the financial reports must have a corresponding Account record. You probably will not forget to create Account records for headings and totals if you include them in your handwritten chart of accounts.

The next step in preparing the Account file involves assigning an account number to each non-blank line on your chart of accounts. Account numbers are six-digit numbers. They consist of five pre-decimal digits and one post-decimal digit. Thus, account numbers can range from 10000.0 to 99999.9. You must assign account numbers in four basic categories, according to the following scheme:

| | |
|-------------|-------------------|
| Assets | 10000.0 - 19999.9 |
| Liabilities | 20000.0 - 29999.9 |
| Income | 30000.0 - 39999.9 |
| Expenses | 40000.0 - 49999.9 |

Notice the first digit of the account number identifies the category of the account. You can assign account numbers within the four categories any way you like. Just remember that the headings, regular accounts, and totals will appear on the financial reports in numeric sequence, according to their account numbers.

There is a systematic way to assign account numbers within the general categories. What you do is use the second digit of the account number to differentiate between groups of accounts on the highest level within each category, the third digit to differentiate between groups of accounts on the next level, the fourth digit for the next level, and so on. Table 3-C illustrates this scheme applied to our sample chart of accounts from Table 3-B. Here we see, for example, that all expense account numbers begin with the digit 4 and are in strict numeric sequence, as they should be. The second digit of the expense account number tells which of the five major groups of expenses any particular account belongs to. For example, account numbers beginning 41 are in the Cost of Income group, while account numbers beginning 43 are in the Department Expenses group. The third, fourth, and fifth digits provide successively more detail within each of the major expense groups. Notice that some expenses require more detailing than others. Very little detail is provided in the Cost of Income expenses, since only the first three digits of the account number are used (the unused digits are zero). Contrast that with the Department Expenses accounts; they need five digits to provide sufficient detail. Figure 3-D shows the breakdown of two expenses category account numbers that use different levels of detail.

Table 3-C. Sample Chart of Accounts Encoded for Account File

| ACCOUNT NUMBER | SUB- ACCOUNT | ACCOUNT NAME | ACCOUNT TYPE | REPORT TYPE | NORMAL BALANCE | TOTAL LEVEL | EXTRA LINES | SALES ACCOUNT | SPECIAL REPORT | THIS MONTH |
|-------------------|-----------------|---------------------------------|--|-----------------------------------|-------------------|----------------|----------------|------------------|-------------------|---------------|
| 10000 0 | 50 | ASSETS | 1 | 2 | 1 | 8 | 2 | | | |
| 11000 0 | 50 | Current Assets | 3 | 2 | 1 | 6 | 1 | | | |
| 11100 0 | 50 | Cash | 3 | 2 | 1 | 5 | 0 | | | |
| 11110 0 | 0 | Revenue Bank | 0 | 2 | 1 | 2 | 0 | | x | 2023 25 |
| 11150 0 | 0 | Petty Cash | 0 | 2 | 1 | 2 | 0 | | x | 40.00 |
| 11199 0 | 50 | Total | 2 | 2 | 1 | 5 | 1 | | | |
| 11400 0 | 50 | Accounts Receivable | 3 | 2 | 1 | 5 | 0 | | | |
| 11410 0 | 50 | Trade Accounts Receivable | 3 | 2 | 1 | 2 | 0 | | | |
| 11412 0 | 0 | Finished Goods Sales Receivable | 0 | 2 | 1 | 0 | 0 | | x | 100941.03 |
| 11414 0 | 0 | Consulting Fees Receivable | 0 | 2 | 1 | 0 | 0 | | x | 1500.00 |
| 11419 0 | 0 | Allow for Doubtful Accounts | 0 | 2 | 2 | 0 | 0 | | x | -3028.23 |
| 11419 0 | 50 | Total | 2 | 2 | 1 | 2 | 0 | | | |
| 11420 0 | 0 | Employee Receivables | 0 | 2 | 1 | 2 | 0 | | x | 1030.00 |
| 11490 0 | 0 | Other Accounts Receivable | 0 | 2 | 1 | 2 | 0 | | x | 0 00 |
| 11499 0 | 50 | Total | 2 | 2 | 1 | 5 | 1 | | | |
| 11600 0 | 50 | Inventory - Finished Goods | 3 | 2 | 1 | 5 | 0 | | | |
| 11610 0 | 0 | Finished Goods (at Mfg Cost) | 0 | 2 | 1 | 2 | 0 | | x | 266195 00 |
| 11620 0 | 0 | Raw Materials | 0 | 2 | 1 | 2 | 0 | | x | 929.13 |
| 11630 0 | 0 | Other Inventory | 0 | 2 | 1 | 2 | 0 | | x | 0 00 |
| 11699 0 | 50 | Total | 2 | 2 | 1 | 5 | 1 | | | |
| 11800 0 | 50 | Prepaid Expense | 3 | 2 | 1 | 5 | 0 | | | |
| 11810 0 | 0 | Prepaid Insurance | 0 | 2 | 1 | 2 | 0 | | x | 877 24 |
| 11820 0 | 0 | Prepaid Taxes | 0 | 2 | 1 | 2 | 0 | | x | 0 00 |
| 11890 0 | 0 | Other Prepaid Expenses | 0 | 2 | 1 | 2 | 0 | | x | 63 50 |
| 11899 0 | 50 | Total | 2 | 2 | 1 | 5 | 1 | | | |
| 11900 0 | 50 | Consulting | 3 | 2 | 1 | 5 | 0 | | | |
| 11900 0 | 51 | Contracts-in-Process | 3 | 2 | 1 | 5 | 0 | | | |
| 11910 0 | 0 | Direct Labor | 0 | 2 | 1 | 2 | 0 | | x | 5400 00 |
| 11920 0 | 0 | Overhead | 0 | 2 | 1 | 2 | 0 | | x | 2700 00 |
| 11940 0 | 50 | Other Direct Charges | 3 | 2 | 1 | 2 | 0 | | | |
| 11942 0 | 0 | Direct Materials | 0 | 2 | 1 | 0 | 0 | | x | 513 75 |
| 11944 0 | 0 | Outside Service | 0 | 2 | 1 | 0 | 0 | | x | 86 19 |
| 11946 0 | 0 | Freight - In | 0 | 2 | 1 | 0 | 0 | | x | 22 07 |
| 11948 0 | 0 | Travel | 0 | 2 | 1 | 0 | 0 | | x | 143 33 |
| 11949 0 | 50 | Total | 2 | 2 | 1 | 2 | 0 | | | |
| 11990 0 | 0 | Credits | 0 | 2 | 2 | 2 | 0 | | x | -1000 00 |
| 11999 0 | 40 | Total | 2 | 2 | 1 | 5 | 0 | | | |
| 11999 0 | 50 | Total Current Assets | 2 | 2 | 1 | 6 | 9 | | | |
| 13000 0 | 50 | Deferred Production Costs | 3 | 2 | 1 | 6 | 0 | | | |
| 13010 0 | 0 | Direct Labor | 0 | 2 | 1 | 2 | 0 | | x | xx xx |
| 13020 0 | 0 | Overhead | 0 | 2 | 1 | 2 | 0 | | x | xx xx |
| 13040 0 | 50 | Other Direct Charges | 3 | 2 | 1 | 2 | 0 | | | |
| 13042 0 | 0 | Direct Materials | 0 | 2 | 1 | 0 | 0 | | x | xx xx |
| 13044 0 | 0 | Outside Services | 0 | 2 | 1 | 0 | 0 | | x | xx xx |
| 13046 0 | 0 | Freight - In | 0 | 2 | 1 | 0 | 0 | | x | xx xx |
| 13049 0 | 50 | Total | 2 | 2 | 1 | 2 | 0 | | | |
| 13990 0 | 0 | Credits | 0 | 2 | 2 | 2 | 0 | | x | xx xx |
| 13999 0 | 50 | Total | 2 | 2 | 1 | 6 | 2 | | | |
| 15000 0 | 50 | Property & Equipment | 0 | 2 | 1 | 6 | 1 | | x | xx xx |
| 15100 0 | 50 | Cost | 3 | 2 | 1 | 5 | 0 | | | |
| 15110 0 | 0 | Machinery & Equipment | 0 | 2 | 1 | 2 | 0 | | x | xx xx |
| 15120 0 | 0 | Furniture & Fixtures | 0 | 2 | 1 | 2 | 0 | | x | xx xx |
| 15130 0 | 0 | Leasehold Improvements | 0 | 2 | 1 | 2 | 0 | | x | xx xx |
| 15199 0 | 50 | Total | 2 | 2 | 1 | 5 | 1 | | | |
| 15800 0 | 0 | Construction-in-Process | 0 | 2 | 1 | 5 | 1 | | x | xx xx |
| 15900 0 | 50 | Accumulated Depreciation | 3 | 2 | 2 | 5 | 0 | | | |
| 15910 0 | 0 | Machinery & Equipment | 0 | 2 | 2 | 2 | 0 | | x | xx xx |
| 15920 0 | 0 | Furniture and Fixtures | 0 | 2 | 2 | 2 | 0 | | x | xx xx |
| 15930 0 | 0 | Leasehold Improvements | 0 | 2 | 2 | 2 | 0 | | x | xx xx |
| 15999 0 | 40 | Total | 2 | 2 | 2 | 5 | 1 | | | |
| 15999 0 | 50 | Total Property & Equipment | 2 | 2 | 1 | 6 | 2 | | | |
| 19999 0 | 50 | Total Assets | 2 | 2 | 1 | 8 | 9 | | | |
| | | | 0-Regular 1-Title 2-Total 3-Heading | 1-Inc. Stmt. 2-Bal. Sht. | 1-DB 2-CR | | | | | |

Table 3-C. Sample Chart of Accounts Encoded for Account File
(Continued)

| ACCOUNT NUMBER | SUB- ACCOUNT | ACCOUNT NAME | ACCOUNT TYPE | REPORT TYPE | NORMAL BALANCE | TOTAL LEVEL | EXTRA LINES | SALES ACCOUNT | SPECIAL REPORT | THIS MONTH |
|-------------------|-----------------|--------------------------------|--|------------------------------------|-------------------|----------------|----------------|------------------|-------------------|---------------|
| 20000.0 | 50 | LIABILITIES & | 1 | 2 | 2 | 8 | 0 | | | |
| 20000.0 | 51 | STOCKHOLDERS' EQUITY | 1 | 2 | 2 | 8 | 1 | | | |
| 21000.0 | 50 | Current Liabilities | 3 | 2 | 2 | 6 | 1 | | | |
| 21100.0 | 0 | Notes Payable | 0 | 2 | 2 | 5 | 0 | | x | xx xx |
| 21200.0 | 0 | Current Matur. on L-T Debt | 0 | 2 | 2 | 5 | 0 | | x | xx xx |
| 21300.0 | 0 | Vouchers Payable | 0 | 2 | 2 | 5 | 0 | | x | xx.xx |
| 21400.0 | 0 | Sales Tax Payable | 0 | 2 | 2 | 5 | 1 | | x | xx.xx |
| 21500.0 | 50 | Income Tax Payable | 3 | 2 | 2 | 5 | 0 | | | |
| 21510.0 | 0 | Federal | 0 | 2 | 2 | 2 | 0 | | x | xx.xx |
| 21520.0 | 0 | State | 0 | 2 | 2 | 2 | 0 | | x | xx xx |
| 21599.0 | 50 | Total | 2 | 2 | 2 | 5 | 1 | | | |
| 21600.0 | 50 | Payroll Taxes Payable | 3 | 2 | 2 | 5 | 0 | | | |
| 21610.0 | 0 | Federal Income Tax Withholding | 0 | 2 | 2 | 2 | 0 | | x | xx.xx |
| 21620.0 | 0 | FICA | 0 | 2 | 2 | 2 | 0 | | x | xx.xx |
| 21630.0 | 0 | Federal Unemployment Tax | 0 | 2 | 2 | 2 | 0 | | x | xx.xx |
| 21640.0 | 0 | State Income Tax Withholding | 0 | 2 | 2 | 2 | 0 | | x | xx xx |
| 21650.0 | 0 | SDI | 0 | 2 | 2 | 2 | 0 | | x | xx.xx |
| 21660.0 | 0 | State Unemployment Tax | 0 | 2 | 2 | 2 | 0 | | x | xx.xx |
| 21699.0 | 50 | Total | 2 | 2 | 2 | 5 | 1 | | | |
| 21700.0 | 50 | Accrued Liabilities | 3 | 2 | 2 | 5 | 0 | | | |
| 21710.0 | 0 | Payroll | 0 | 2 | 2 | 2 | 0 | | x | xx xx |
| 21720.0 | 0 | Vacation | 0 | 2 | 2 | 2 | 0 | | x | xx xx |
| 21730.0 | 0 | Property Taxes | 0 | 2 | 2 | 2 | 0 | | x | xx xx |
| 21790.0 | 0 | Other Accrued Liabilities | 0 | 2 | 2 | 2 | 0 | | x | xx xx |
| 21799.0 | 50 | Total | 2 | 2 | 2 | 5 | 1 | | x | xx.xx |
| 21810.0 | 0 | Unearned Income | 0 | 2 | 2 | 5 | 0 | | x | xx.xx |
| 21820.0 | 0 | Customer Overpayments | 0 | 2 | 2 | 5 | 0 | | x | xx.xx |
| 21830.0 | 0 | Unidentified Customer Receipts | 0 | 2 | 2 | 5 | 1 | | x | xx.xx |
| 21999.0 | 50 | Total Current Liabilities | 2 | 2 | 2 | 6 | 1 | | | |
| 22000.0 | 50 | Long Term Liabilities | 3 | 2 | 2 | 6 | 0 | | | |
| 22100.0 | 0 | Notes Payable | 0 | 2 | 2 | 5 | 0 | | x | xx.xx |
| 22200.0 | 0 | Deferred Income Taxes Payable | 0 | 2 | 2 | 5 | 0 | | x | xx.xx |
| 22999.0 | 50 | Total | 2 | 2 | 2 | 6 | 9 | | | |
| 23000.0 | 50 | Stockholders' Equity | 3 | 2 | 2 | 6 | 0 | | | |
| 23100.0 | 0 | Capital Stock | 0 | 2 | 2 | 5 | 0 | | x | xx xx |
| 23200.0 | 0 | Additional Paid-In Capital | 0 | 2 | 2 | 5 | 0 | | x | xx.xx |
| 23900.0 | 0 | Retained Earnings | 0 | 2 | 2 | 5 | 0 | | x | xx xx |
| 23999.0 | 50 | Total | 2 | 2 | 2 | 6 | 2 | | | |
| 29999.0 | 50 | Total Liab & Stockholders' Eq | 2 | 2 | 2 | 8 | 9 | | | |
| 30000.0 | 50 | INCOME | 1 | 1 | 2 | 8 | 2 | | | |
| 31000.0 | 50 | Sale of Goods | 3 | 1 | 2 | 5 | 0 | | | |
| 31110.0 | 0 | Finished Goods | 0 | 1 | 2 | 2 | 0 | x | x | xx.xx |
| 31190.0 | 0 | Sales Returns & Allowances | 0 | 1 | 1 | 2 | 0 | x | x | xx xx |
| 31199.0 | 50 | Total | 2 | 1 | 2 | 5 | 1 | | | |
| 31210.0 | 0 | Consulting Fees | 0 | 1 | 2 | 5 | 1 | | x | xx.xx |
| 31300.0 | 50 | Royalties Income | 3 | 1 | 2 | 5 | 0 | | | |
| 31310.0 | 0 | Patent Royalties | 0 | 1 | 2 | 2 | 0 | | x | xx.xx |
| 31320.0 | 0 | Consulting Royalties | 0 | 1 | 2 | 2 | 0 | | x | xx xx |
| 31399.0 | 50 | Total | 2 | 1 | 2 | 5 | 1 | | | |
| 31500.0 | 50 | Other Income | 3 | 1 | 2 | 5 | 0 | | | |
| 31510.0 | 0 | Collection of Bad Debts | 0 | 1 | 2 | 2 | 0 | | x | xx.xx |
| 31590.0 | 0 | Miscellaneous Income | 0 | 1 | 2 | 2 | 0 | | x | xx xx |
| 31599.0 | 50 | Total | 2 | 1 | 2 | 5 | 1 | | | |
| 31999.0 | 50 | Total Income | 2 | 1 | 2 | 8 | 3 | | | |
| | | | 0-Regular 1-Title 2-Total 3-Heading | 1-Inc. Stmnt. 2-Bal. Sht. | 1-DB 2-CR | | | | | |

Table 3-C. Sample Chart of Accounts Encoded for Account File
(Continued)

| ACCOUNT NUMBER | SUB- ACCOUNT | | ACCOUNT TYPE | REPORT TYPE | NORMAL BALANCE | TOTAL LEVEL | EXTRA LINES | SALES ACCOUNT | SPECIAL REPORT | THIS MONTH |
|-------------------|-----------------|---------------------------------|--|-----------------------------------|-------------------|----------------|----------------|------------------|-------------------|---------------|
| 40000 0 | 50 | EXPENSES | 1 | 1 | 1 | 8 | 2 | | | |
| 41000 0 | 50 | Cost of Income | 3 | 1 | 1 | 6 | 0 | | | |
| 41100 0 | 0 | Cost of Sale of Goods | 0 | 1 | 1 | 5 | 0 | | x | xx.xx |
| 41200 0 | 0 | Cost of Consulting Fees | 0 | 1 | 1 | 5 | 0 | | x | xx.xx |
| 41300 0 | 0 | Royalty Payments | 0 | 1 | 1 | 5 | 0 | | x | xx.xx |
| 41900 0 | 0 | Variance Expense | 0 | 1 | 1 | 5 | 0 | | x | xx.xx |
| 41999 0 | 50 | Total | 2 | 1 | 1 | 6 | 2 | | | |
| 42000 0 | 50 | Development Project Expenses | 3 | 1 | 1 | 6 | 0 | | | |
| 42010 0 | 0 | Direct Labor | 0 | 1 | 1 | 2 | 0 | | x | xx.xx |
| 42020 0 | 0 | Overhead | 0 | 1 | 1 | 2 | 0 | | x | xx.xx |
| 42040 0 | 50 | Other Direct Charges | 3 | 1 | 1 | 2 | 0 | | | |
| 42042 0 | 0 | Direct Materials | 0 | 1 | 1 | 0 | 0 | | x | xx.xx |
| 42044 0 | 0 | Outside Services | 0 | 1 | 1 | 0 | 0 | | x | xx.xx |
| 42046 0 | 0 | Freight - In | 0 | 1 | 1 | 0 | 0 | | x | xx.xx |
| 42048 0 | 0 | Travel | 0 | 1 | 1 | 0 | 0 | | x | xx.xx |
| 42049 0 | 50 | Total | 2 | 1 | 1 | 2 | 0 | | | |
| 42999 0 | 50 | Total Development Proj Expense | 2 | 1 | 1 | 6 | 9 | | | |
| 43000 0 | 50 | Department Expenses | 3 | 1 | 1 | 6 | 1 | | | |
| 43100 0 | 50 | Salaries, Wages, & Benefits | 3 | 1 | 1 | 5 | 0 | | | |
| 43110 0 | 0 | Direct Labor | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43120 0 | 0 | Indirect Labor | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43130 0 | 0 | Overtime Premium | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43140 0 | 0 | Holiday-Vacation-Sick Leave | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43150 0 | 0 | Jury Duty & Other Leave | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43160 0 | 0 | Payroll Taxes | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43170 0 | 0 | Bonus | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43190 0 | 0 | Other Fringe Benefits | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43199 0 | 50 | Total | 2 | 1 | 1 | 5 | 1 | | | |
| 43200 0 | 50 | Materials & Supplies | 3 | 1 | 1 | 5 | 0 | | | |
| 43210 0 | 0 | Computer Materials and Supplies | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43220 0 | 0 | Raw Materials & Supplies | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43230 0 | 0 | Stationery-Matr'ls and Supplies | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43290 0 | 0 | Other Materials and Supplies | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43299 0 | 50 | Total | 2 | 1 | 1 | 5 | 1 | | | |
| 43300 0 | 50 | Facilities & Equipment | 3 | 1 | 1 | 5 | 0 | | | |
| 43310 0 | 0 | Rent - Office Space | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43320 0 | 0 | Equipment Leases | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43330 0 | 0 | Depreciation | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43340 0 | 0 | Equipment Maintenance | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43350 0 | 0 | Janitorial Service | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43360 0 | 0 | Utilities | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43370 0 | 0 | Auto Expense | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43390 0 | 0 | Equipment Rental | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43399 0 | 50 | Total | 2 | 1 | 1 | 5 | 1 | | | |
| 43400 0 | 50 | Outside Services | 3 | 1 | 1 | 5 | 0 | | | |
| 43410 0 | 0 | Professional Services - Legal | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43420 0 | 0 | Prof Services - Consulting | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43430 0 | 0 | Employment Service | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43440 0 | 0 | Credit & Collection Service | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43490 0 | 0 | Other Outside Services | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43499 0 | 50 | Total | 2 | 1 | 1 | 5 | 1 | | | |
| 43500 0 | 50 | Advertising | 3 | 1 | 1 | 5 | 0 | | | |
| 43510 0 | 0 | Periodicals | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43520 0 | 50 | Trade Shows | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43521 0 | 0 | Shows - Travel | 0 | 1 | 1 | 0 | 0 | | | xx.xx |
| 43529 0 | 0 | Shows - Other | 0 | 1 | 1 | 0 | 0 | | | xx.xx |
| 43529 0 | 50 | Total | 2 | 1 | 1 | 2 | 9 | | | |
| 43530 0 | 0 | Direct Mailings - Samples | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43540 0 | 0 | Brochure Printing and Mailing | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43560 0 | 0 | Outside Prep Work on Ads | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43590 0 | 0 | Other Advertising | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43599 0 | 50 | Total Advertising | 2 | 1 | 1 | 5 | 1 | | | |
| | | | 0-Regular 1-Title 2-Total 3-Heading | 1-Inc. Stmt. 2-Bal. Sht. | 1-DB 2-CR | | | | | |

Table 3-C. Sample Chart of Accounts Encoded for Account File
(Continued)

| ACCOUNT NUMBER | SUB- ACCOUNT | | ACCOUNT TYPE | REPORT TYPE | NORMAL BALANCE | TOTAL LEVEL | EXTRA LINES | SALES ACCOUNT | SPECIAL REPORT | THIS MONTH |
|-------------------|-----------------|----------------------------------|--|----------------------------------|-------------------|----------------|----------------|------------------|-------------------|---------------|
| 43600.0 | 50 | Order & Shipping Expenses | 3 | 1 | 1 | 5 | 0 | | | |
| 43610.0 | 0 | Shipping Expense - Outgoing | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43620.0 | 0 | Order/Shipping Forms Printing | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43630.0 | 0 | Postage | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43699.0 | 50 | Total | 2 | 1 | 1 | 5 | 1 | | | |
| 43700.0 | 50 | Other Expenses | 3 | 1 | 1 | 5 | 0 | | | |
| 43710.0 | 0 | Taxes-Licenses-Fees | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43720.0 | 0 | Insurance | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43730.0 | 0 | Travel & Employee Business Exp | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43740.0 | 0 | Communications | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43750.0 | 0 | Doubtful Accounts | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43760.0 | 0 | Dues and Subscriptions | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43770.0 | 0 | Other Freight - In | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43780.0 | 0 | Allow'l Customer Underpayment | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43790.0 | 0 | Miscellaneous | 0 | 1 | 1 | 2 | 0 | | | xx.xx |
| 43799.0 | 50 | Total | 2 | 1 | 1 | 5 | 1 | | | |
| 43810.0 | 0 | Transfer in from Other Depts | 0 | 1 | 2 | 5 | 1 | | | xx.xx |
| 43900.0 | 50 | Credits | 3 | 1 | 2 | 5 | 0 | | | |
| 43910.0 | 0 | Direct Labor Transferred Out | 0 | 1 | 2 | 2 | 0 | | | xx.xx |
| 43920.0 | 0 | Overhead Applied | 0 | 1 | 2 | 2 | 0 | | | xx.xx |
| 43990.0 | 0 | Est O'head (Over) Under Absorbed | 0 | 1 | 2 | 2 | 0 | | | xx.xx |
| 43999.0 | 40 | Total | 2 | 1 | 2 | 5 | 1 | | | |
| 43999.0 | 50 | Total Department Expenses | 0 | 1 | 1 | 6 | 1 | | | xx.xx |
| 44000.0 | 50 | Non-Operating (Income) Expense | 3 | 1 | 1 | 6 | 0 | | | |
| 44100.0 | 0 | (Gain) Loss on Prop /Equip Sale | 0 | 1 | 2 | 5 | 0 | | | xx.xx |
| 44200.0 | 0 | Interest (Income) Expense | 0 | 1 | 1 | 5 | 0 | | | xx.xx |
| 44999.0 | 50 | Total | 2 | 1 | 1 | 6 | 1 | | | |
| 45000.0 | 50 | Estimated Income Taxes | 3 | 1 | 1 | 6 | 0 | | | |
| 45100.0 | 0 | Federal | 0 | 1 | 1 | 5 | 0 | | | xx.xx |
| 45200.0 | 0 | State | 0 | 1 | 1 | 5 | 0 | | | xx.xx |
| 45999.0 | 50 | Total | 2 | 1 | 1 | 6 | 2 | | | |
| 49999.0 | 50 | Total Expense | 2 | 1 | 1 | 8 | 9 | | | |
| | | | 0-Regular 1-Title 2-Total 3-Heading | 1-Inc. Smt. 2-Bal. Sht. | 1-DB 2-CR | | | | | |

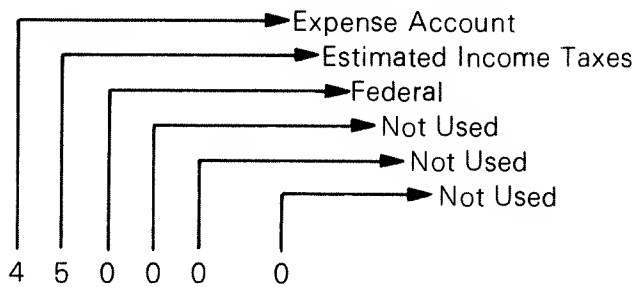
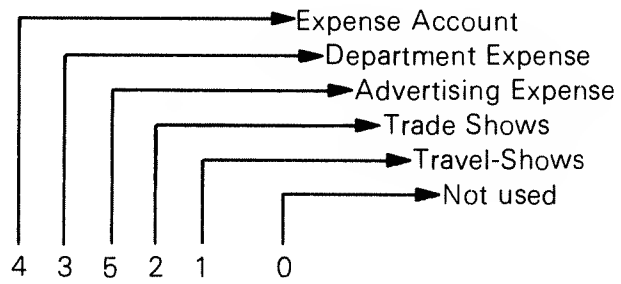


Figure 3-D. Breakdown of Sample Account Numbers

There is a field in each Account record that allows some additional flexibility in assigning account numbers. The Sub-account Number field enables you to put a heading (or other descriptive text) between two accounts with consecutive account numbers. In effect, the Sub-account Number field is a two-digit extension of the Account Number field. There is a restriction on the use of sub-account numbers: only title, heading, and total account records can use sub-account numbers. Regular accounts may not use sub-account numbers. This restriction maintains compatibility with the Accounts Payable and Accounts Receivable programs described in the Osborne and Associates publication *Accounts Payable and Accounts Receivable*. Table 3-C shows sub-account numbers assigned to our sample chart of accounts. Notice that account number 11419.0, sub-account number 0 (11419.0/0) is a regular account, the Allowance for Doubtful Accounts account. There is also an account number 11419.0/50 which is a total record for Trade Accounts Receivable.

So far we have discussed designing a chart of accounts and assigning account numbers and sub-account numbers as the first step in setting up a chart of accounts in the Account file. Looking now at the right hand side of Table 3-C, you will see that there is still more information required on each of the Account records. Let's discuss the rest of the items on Table 3-C from left to right, starting with the Account Type field.

We have already described the four types of account records you need in order to set up a chart of accounts in the Account file. The Account Type field is merely an encoding of this information. Table 3-E provides the details.

Table 3-E. Account Types

| ACCOUNT TYPE | DESCRIPTION |
|--------------|---|
| 0 | Regular -- Actual accounts with monthly, quarterly, etc. balances. Can receive postings. |
| 1 | Title -- Account Name field prints on financial reports (in expanded type, if available). Its Normal Balance field sets the standard balance to prevail until the next title account. No dollar balances maintained. Cannot receive postings. |
| 2 | Total -- Account Name field prints on financial reports. Causes printing of the total for the level in its Total Level field (totals at this level and all lower levels are then reset). No dollar balances maintained. Cannot receive postings. |
| 3 | Heading -- Account Name field prints on financial reports. No dollar balances maintained. Cannot receive postings. |

The Report Type field determines whether the Account record is part of the income statement report or balance sheet report. The balance sheet report always includes accounts from the Assets and Liabilities categories while the Income and Expense categories appear on the income and expense report. If the Report Type field is '1', the account appears on the income statement; if it is '2', the account is a balance sheet account.

The Normal Balance field designates whether the account usually has a debit or credit balance. Here, a '1' means a debit balance and a '2' means a credit balance. Most Asset accounts have a normal debit balance, Liability accounts have a normal credit balance, Income accounts have a normal credit balance, and Expense accounts have a normal debit balance. Table 3-C shows that there can be exceptions to this rule, however. Ultimately, an account's Normal Balance field, together with the Normal Balance field of the title account that most closely precedes it, determines the sign of the amount printed on the financial report. If the two Normal Balance fields are different (one is a credit and the other is a debit) the account amount is multiplied by -1 prior to printing. For example, in Table 3-C title account 10000.0/50 Assets has a normal balance '1' (debit). Account 11419.0/0 Allow for Doubtful Accounts has a normal balance '2', so its balance is multiplied by -1 before printing.

The Total Level field has two uses. For balance sheet accounts, it determines which of three columns the account amount or total amount will print in. If the Total Level field is '0', '1', or '2', the amount prints in the left-most column. '3', '4', or '5' cause the amount to print in the middle column. The amounts print in the right-most column with total levels '6', '7', '8', or '9'. Income and Expense accounts all print in the same column, regardless of total level.

The Total Level field also determines how often totals will print and how many levels of detail they will include. Thus, it plays a vital part in implementing the account hierarchy shown in Table 3-C by using different levels of indentation. The Total Level field ranges from 0 to 9, with '9' being most general and '0' most specific. This means that level 9 includes the account amounts and subtotals from levels 8, 7, 6, 5, 4, 3, 2, 1, and 0. Similarly, level 5 includes subtotals and account amounts from levels 4, 3, 2, 1, and 0. Level 0 can only be the amount from a single account.

To better understand how the total level works, let's imitate the way the computer accumulates totals during one of the financial reports. For example, we can simulate part of a balance sheet report with data from the first part of Table 3-C. To start with, we need ten accumulators numbered 0 through 9, corresponding to total levels 0 through 9. Initially, these accumulators have a value of 0.

Now we are ready to proceed down the chart of accounts (Table 3-C). The first three accounts are title and heading accounts. We can skip them, since they have no balances and hence no bearing on totals. The next account, 11110.0 Revenue Bank, is a level 2 account with a balance of \$2023.25. Add this amount to accumulators 2, 3, 4, 5, 6, 7, 8, and 9:

| | | | |
|----------------|---------|----------------|---------|
| Accumulator 0: | 0.00 | Accumulator 5: | 2023.25 |
| Accumulator 1: | 0.00 | Accumulator 6: | 2023.25 |
| Accumulator 2: | 2023.25 | Accumulator 7: | 2023.25 |
| Accumulator 3: | 2023.25 | Accumulator 8: | 2023.25 |
| Accumulator 4: | 2023.25 | Accumulator 9: | 2023.25 |

This is a level 2 account, so we now print the amount in accumulator 2 (along with the data for account 11110.0). After printing, zero accumulators 2, 1, and 0. Then proceed to the next account, 11150.0 Petty Cash. This is a level 2 account with a balance of \$40. It affects the accumulators as follows:

| | | | |
|----------------|---------|----------------|---------|
| Accumulator 0: | 0.00 | Accumulator 5: | 2063.25 |
| Accumulator 1: | 0.00 | Accumulator 6: | 2063.25 |
| Accumulator 2: | 40.00 | Accumulator 7: | 2063.25 |
| Accumulator 3: | 2063.25 | Accumulator 8: | 2063.25 |
| Accumulator 4: | 2063.25 | Accumulator 9: | 2063.25 |

Again, we print the amount in accumulator 2 (along with data from account 11150.0). Zero accumulators 2, 1, and 0. The next account, 11199.0 Total, is a level 5 total account. Total accounts, like title and heading accounts, have no balance to add to the accumulators. Therefore, we just print the amount in accumulator 5, then zero accumulators 5, 4, 3, 2, 1, and 0. Note that the amount in accumulator 5 was the sum of the balances from accounts 11110.0 and 11150.0.

The algorithm should be evident by now. For a regular account at level X, add the account balance to accumulators X through 9. Print the amount in accumulator X, then zero accumulators X through 0. For a total account at level X, there is no account balance to add to the accumulators. Just print the amount in accumulator X, then zero accumulators X through 0. The changes that other of the Asset accounts cause in the accumulators further illustrates the algorithm:

Account 11400.0, level 5, heading:

No change

Account 11410.0, level 2, heading:

No change

Account 11412.0, level 0, \$100941.03:

| | | | |
|----------------|-----------|----------------|-----------|
| Accumulator 0: | 100941.03 | Accumulator 5: | 100941.03 |
| Accumulator 1: | 100941.03 | Accumulator 6: | 103004.28 |
| Accumulator 2: | 100941.03 | Accumulator 7: | 103004.28 |
| Accumulator 3: | 100941.03 | Accumulator 8: | 103004.28 |
| Accumulator 4: | 100941.03 | Accumulator 9: | 103004.28 |

Account 11414.0, level 0, \$1500.00:

| | | | |
|----------------|-----------|----------------|-----------|
| Accumulator 0: | 1500.00 | Accumulator 5: | 102441.03 |
| Accumulator 1: | 102441.03 | Accumulator 6: | 104504.28 |
| Accumulator 2: | 102441.03 | Accumulator 7: | 104504.28 |
| Accumulator 3: | 102441.03 | Accumulator 8: | 104504.28 |
| Accumulator 4: | 102441.03 | Accumulator 9: | 104504.28 |

Account 11419.0, level 0, \$-3028.23:

| | |
|--------------------------|--------------------------|
| Accumulator 0: - 3028.23 | Accumulator 5: 99412.80 |
| Accumulator 1: 99412.80 | Accumulator 6: 101476.05 |
| Accumulator 2: 99412.80 | Accumulator 7: 101476.05 |
| Accumulator 3: 99412.80 | Accumulator 8: 101476.05 |
| Accumulator 4: 99412.80 | Accumulator 9: 101476.05 |

Account 11419.0, level 2, total:

| | |
|-------------------------|--------------------------|
| Accumulator 0: 0.00 | Accumulator 5: 99412.80 |
| Accumulator 1: 99412.80 | Accumulator 6: 101476.05 |
| Accumulator 2: 99412.80 | Accumulator 7: 101476.05 |
| Accumulator 3: 99412.80 | Accumulator 8: 101476.05 |
| Accumulator 4: 99412.80 | Accumulator 9: 101476.05 |

The Extra Lines field follows the Total Level field on Table 3-C. It simply specifies the number of blank lines to skip on the financial reports after printing the account data. If the Extra Lines field is 9, the report skips to a new page. In Table 3-C, there are two extra blank lines following account 10000.0, one extra blank line following account 11000.0, and the report goes to a new page following account 11999.0/50.

The Sales Account field identifies the major income accounts. The total of these accounts is the divisor for calculating the "percent of sales" on the financial reports. The sample chart of accounts in Table 3-C has two sales accounts: 31110.0 Finished Goods, and 31190.0 Sales Returns and Allowances.

The Special Report field designates which accounts will appear on the "special" financial report. Use this field to specify the accounts that will be on the special report. In Table 3-C we have chosen to include all regular accounts on the special report.

The last field on Table 3-C, the This Month field, represents the seven Amount fields that are present on every regular account record. The Amount fields contain balances for this month, this quarter, this year, last year, and the three quarters prior to this quarter. When you first add an account to the Account file, you should put its up-to-date balances in the Amount fields. You may opt to systematically omit certain balances when you set up the account initially. For example, you might not enter the balances for previous quarters.

POSTINGS FROM ACCOUNTS PAYABLE AND ACCOUNTS RECEIVABLE

This General Ledger accepts postings from outside programs via the External Posting file. The Accounts Payable and Accounts Receivable programs described in the Osborne & Associates publication *Accounts Payable and Accounts Receivable* will write records on that file. Entering a new invoice in Accounts Payable generates postings to the Vouchers Payable account and operator-designated Expense accounts. Paying an invoice creates postings to decrease the Vouchers Payable and Cash accounts. In Accounts Receivable, entering a new invoice generates a posting to increase the Accounts Receivable account. Entering payment on an invoice creates postings to decrease the Accounts Receivable account and increase the Cash account.

Modifying payables or receivables invoices produces postings to adjust the General Ledger accounts affected by the changes. See *Accounts Payable and Accounts Receivable* for a more complete discussion.

Let's look at the postings to the sample chart of accounts in Table 3-C that would result from an Accounts Payable invoice with the following particulars:

Vendor: Breadboard Magazine
 Invoice Number: 31761
 Item: January Ad
 Amount: \$890.00

When you enter this invoice, account 21300.00 Vouchers Payable automatically receives a posting to increase by \$890.00. If you elect to expense this invoice to normal magazine advertising, account 43510.0 Periodicals also receives a posting to increase by \$890.00. Subsequently paying this invoice results in postings to decrease accounts 21300.00 Vouchers Payable and 11110.0 Revenue Bank by \$890.00.

ENTERING DIRECT POSTINGS

The Accounts Payable and Accounts Receivable programs will take care of most of the postings to Expense accounts and a few others as well. You will have to directly enter postings to the rest of the accounts. Using 2) Direct Posting Entry, you can create postings to any account on the Account file. These direct postings are appended to the Direct Posting file. 3) Update clears the file. This gives you the flexibility to enter postings in small batches throughout the month (running 3) Update signals the end of a batch), or of holding onto them and entering them all just before running 3) Update. 2) Direct Posting Entry will list the current contents of the Direct Posting File at any time.

END-OF-MONTH PROCEDURES

At the end of each month, just before you are ready to print the financial reports, you must run 3) Update. This program takes the postings from the External Posting file and the Direct Posting file and adds them to the appropriate accounts in the Account file. While doing this, it prints an account-by-account listing of the activity. This listing is your audit trail of account balance changes.

You may run 3) Update more often than once a month if you wish. You may have to if there is not enough room on either your Direct Posting file or External Posting file for one full month's worth of direct postings or external postings. The program detects these file full conditions. This is discussed further in the Error Recovery section of this chapter.

Be sure to look over the update activity listing for errors. At the end of the listing there is a separate section of program-detected errors such as postings to nonexistent accounts. You must rectify these errors before running the financial reports. To make corrections, you can enter and update additional direct postings.

The next step in the end-of-month processing is to print the trial income statement. This accomplishes three things. First, you can use it to check account balances before running the final income and expense statement, adjusting incorrect account balances by creating and updating additional direct postings. Second, the trial balance statement adds up the balances of those accounts that are marked sales accounts by the Sales Account field, then it saves these totals on a special Account record. Later, they are used as divisors in computing the percent column on the final income and expense statement. Third, the trial income and expense statement provides a gross profit figure you can directly post to the Retained Earnings account (23900.0 in Table 3-C). Now print a trial balance report. Check the account balances. Adjust them as needed with direct postings.

After you have run the trial income statement and trial balance sheet and corrected any incorrect account balances, you can print as many copies of the income statement and balance sheet as you need. Then use the monthly "move totals" operation in 4) Reports to clear the monthly balances on the Income and Expense accounts. This will not clear the Asset and Liability account balances, since they are running totals.

END-OF-QUARTER PROCEDURE

After printing the monthly reports at the end of the last month in a quarter, print the quarterly income statement and balance sheet. Then do a quarterly "move totals" operation in 4) Reports instead of a monthly "move totals" operation. The quarterly "move totals" automatically includes a monthly "move totals". In addition, it shifts the four quarterly balance fields in each Account record down one field. What was this quarter's balance becomes the first previous quarter's balance, which in turn becomes the second previous quarter's balance, and so on. The third previous quarter's balance is lost, since there is no fourth previous quarter's balance.

END-OF-YEAR PROCEDURE

After printing the final monthly and quarterly income statements and balance sheets for the year, print the yearly income statement and balance sheet. Then do a yearly "move totals" operation in 4) Reports instead of a quarterly or monthly "move totals" operation. The yearly "move totals" includes a quarterly and monthly "move totals". It also shifts what was this year's balance to last year's balance (last year's balance is lost) and clears this year's balance.

ELECTIVE PROCEDURES

There are several features of General Ledger that you may use at your discretion. You can actually run any of the reports in 4) Reports any time you wish. In fact, there is no prescribed time to print the special report or the income statement or balance sheet for any of the previous quarter account balances. The account balances will be up-to-date as of the last time that you updated the Account file using 3) Update.

You may need to use 5) Account File Maintenance from time to time. With it, you can add new accounts, delete old accounts, and modify existing accounts. Do be careful about directly modifying account balances using 5) Account File Maintenance; there is no audit trail. It is a much better practice to enter and update additional direct postings to adjust account balances.

5) Account File Maintenance will also provide you with a plain listing of the account records, should you ever need one.

Occasionally, you may need to reorganize the Account file. Use 6) Account File Reorganize to do this. This program recovers otherwise unusable space in the Account file that results from deleting Account records. You can run 6) Account File Reorganize whenever you want.

ERRORS AND ERROR RECOVERY

Errors will occur in any accounting system, whether computerized or manual. When you first start using your programs, you will probably encounter occasional errors caused by problems in the computer programs themselves. These errors are inevitable even with standardized programs like the ones in this book. For one thing, transcription errors will almost certainly occur when the programs are transferred from the book to the computer. But even after you correct these errors, other program errors can still arise. There is no way to test every possible combination of data that you can enter, no matter how extensively the programs are tested before you actually use them.

In practice, though, programming errors usually subside rather quickly, leaving you with operator errors to take care of. The General Ledger programs have a number of features built in that will allow you to easily correct operator mistakes if you notice them in time. These features include use of the backspace and line erase keys to correct any data item that you have not finished entering. Also, you can usually review each screenful of data and change specific items on it before they become permanent. These features are common to all of the General Ledger programs. The following paragraphs describe some of these specific errors that can occur in each of the General Ledger programs, and what to do about them.

MENU

Now and then you will probably choose the wrong program in the Menu. This is no problem, since every program allows you to exit immediately back to the Menu. See Chapter 4 for more explicit instructions for each program.

POSTING ENTRY

After you enter a posting in 2) Direct Posting Entry, the program checks to make sure there is still enough room on the Direct Posting file for another posting. If not, it displays this message:

```
FILE FULL - RUN G/L UPDATE  
KEY <CONTINUE> <RETURN> TO EXIT
```

At this point, you must run 3) Update. It clears both the Direct Posting file and the External Posting file after updating the Account file.

2) Direct Posting Entry can halt with this same file full message even when the Direct Posting file is not completely full. This is because there must be room on the External Posting file for all the postings on the Direct Posting file. Thus, if the External Posting file is completely full with postings from Accounts Payable and Accounts Receivable, you will not be able to enter any direct postings without first running 3) Update.

The External Posting file can also become full during Accounts Payable or Accounts Receivable. Refer to *Accounts Payable and Accounts Receivable* for a more complete description of this problem and what to do about it.

UPDATE ERRORS

Basically, there are three kinds of errors that can occur during 3) Update. The program will detect the error if there is a posting to an account that does not exist. It prints a list of these errors at the end of the update report. The recovery procedure for this error depends on whether you entered the correct account number or not. If not, re-enter the posting using 2) Direct Posting Entry, this time with the correct account number. If the account number is correct, you must use 5) Account File Maintenance to create a record for the account on the Account file. Then you can re-enter the posting using 2) Direct Posting Entry. In either case, re-run 3) Update after you re-enter the posting.

The program will not detect the other two kinds of update errors. You must check the update report to make sure you have not entered postings to the wrong account, or for the wrong amount. The recovery procedure is the same for either of these problems. First, you must enter a direct posting to cancel the erroneous posting. Do this by making the new posting the same as the old posting, but reverse the sign of the posting amount. Now enter another new direct posting to the correct account for the correct amount. Again, when you are finished entering new direct postings to correct update errors, re-run 3) Update to effect the changes in the Account file. For example, suppose you found a posting to account 42046.0 Freight-In for \$137.26 which should have been to account 43770.0 Other Freight-In for \$173.26. Fix this by entering two postings using 2) Direct Posting Entry. The first posting is to account 42046.0 for \$-137.26 to back out the error. The second posting is to account 43770.0 for \$173.26 to put in the proper posting. Run 3) Update to effect these postings.

ACCOUNT FILE FULL

The flashing bulletin FILE FULL - RUN REORGANIZE in 5) Account File Maintenance means there is no room on the Account file for any new records. Run 6) Account File Reorganize to recover any wasted space caused by deleted records. If this does not help, you must somehow increase the size of the Account file (your programmer should be able to help with this).

POWER FAILURE

If a power failure occurs during most programs you can recover by restarting the program as soon as the computer is running normally again. If a power failure occurs during 3) Update, make an especially careful check of the update report to make sure all postings are updated correctly. You may have to enter direct postings to adjust a partially updated account. If a power failure occurs during the "move totals" operation in 4) Reports, you must revert to your disk backups, repeating all operations you have performed since the backups were made.

Chapter Four

USER'S MANUAL

The user's manual contains step-by-step instructions for use of all programs included in this General Ledger system. Explanations of program processes, error recovery, and exceptional procedures are also given. User flowcharts are provided so that, once you are familiar with General Ledger processing, you can refer to them for a quick reference of program flow.

There are several items worthy of mention which are characteristic of all programs throughout this accounting system. This first section describes those characteristics. Read it carefully before going on to the step-by-step instructions for each program.

DATA ENTRY

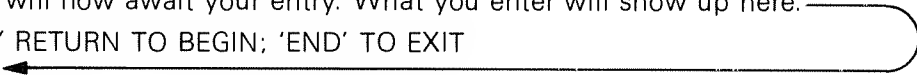
It is important that you be familiar with the different ways data is entered into the system. All data is entered by means of the keyboard, using the CRT screen to display messages that describe the entry. There are two modes in which data can be entered: input and keyin.

Entry in input mode is always prompted by a question, with a question mark and cursor waiting on the next line. You will sometimes see, for example, the following displayed on your screen:

```
KEY RETURN TO BEGIN; 'END' TO EXIT
?__
```

The program will now await your entry. What you enter will show up here.

```
KEY RETURN TO BEGIN; 'END' TO EXIT
?__
```



At this time you should either press the RETURN key, or type in END and then press the RETURN key.

The second mode of keyboard entry, keyin, is used more often. **Keyin entry is prompted by a series of asterisks appearing on the screen, and the CRT cursor waiting at the first asterisk.** These asterisks always follow a question or field description which identifies what you should enter.

A typical keyin will appear as follows:

```
ACCOUNT NUMBER _*****
```

Now when you key a character, it will replace an asterisk.

The length of your entry is limited by the number of asterisks displayed. You do not have to enter as many characters as there are asterisks — the asterisks represent only a length limit on entry. The **BACKSPACE** key backs out the last character and lets you re-enter it, except when the cursor is at the position of the first asterisk; then [BACKSPACE] has no effect. The **LINE ERASE** key is also effective during the keyin in clearing out all characters entered in the course of the keyin; the cursor returns to the position of the first asterisk and awaits entry. Keyin entry is always terminated by pressing the **RETURN** key.

Each data entry falls in one of two categories: alphanumeric or numeric. A Name field, Address field and Description field are three examples of an alphanumeric field. **Any key or combination of keys on the keyboard that produces a valid printing character can be used for alphanumeric entries.** You are most likely to use letters, numbers and punctuation symbols for alphanumeric entries.

Only digits, [+], [-], and [SPACE] are allowed when entering numeric values, however. Blank or unfilled spaces (indicated by a "␣" symbol) have no effect on the value of a numeric entry. For example, if you have a numeric field as follows:

```
AMOUNT *****
```

you could enter the value 123.45 as

```
AMOUNT 123.45**
```

or

```
AMOUNT ␣␣123 45
```

Either way the value is still 123.45.

Sometimes the program further restricts numeric entry by limiting the range of values you can enter. Maybe only whole numbers between 0 and 14 will be allowed, for example. Throughout this chapter, numeric ranges are described by the numbers in parentheses following each field description or entry instruction.

GENERAL LEDGER ACCOUNT NUMBERS

General Ledger account numbers are made up of six digits. There are five pre-decimal digits and one post-decimal digit, comprising an xxxxx.x format. General Ledger numbers may range from 00000.1 to 99999.9. In addition, you may append a sub-account number between 0 and 99 to the General Ledger number (indicated by an xxxxx.x/xx format). This sub-account number is used for title, heading and total Account records. Methods for designing your chart of accounts and assigning General Ledger account numbers are discussed in detail in Chapter 3.

ENTRY CODES

Much information is entered via alphanumeric or numeric codes, such as the General Ledger account numbers described above. But unlike General Ledger account numbers, many coded entries do not remain constant throughout the system. Rather, many coded entry options are peculiar to each program, and as such are defined by each program. Such coded entries are defined in a prompt message similar to the following, with options displayed in parentheses after the prompt message:

```
ENTER OPERATION CODE (0=EXIT, 1=ADD, 2=CHANGE)
␣
```

Enter '1' if you wish to perform the ADD operation, or enter '2' if you wish to perform the CHANGE operation, then key [RETURN]. To exit the program you simply press the RETURN key; this blank (␣) entry is equivalent to a '0' in most cases.

A field number usually identifies each individual data item displayed on the screen. During a CHANGE operation you can change the value of a data item by entering its field number at the appropriate time. The prompt message for such an entry usually appears as follows:

```
ENTER FIELD TO CHANGE (0 IF NONE)
␣*
```

At this time you may either enter a field number, as displayed on each individual display, or simply key [RETURN] if there are no changes or all changes have been made. Thus the field number is a kind of code, and its meaning is derived from looking at the entire CRT display. Note that if there is a data item displayed, but it has no identifying field number on this particular screen display, it cannot be changed during this program.

For any entry you can just key [RETURN] without entering any other character, unless a blank entry is not allowed by entry range restrictions. During numeric entry a blank entry is the same as entering '0', then keying [RETURN]. During alphanumeric entry it is the same as entering a blank (␣), then keying [RETURN].

Dates are entered as six-digit numbers with no slashes or dashes separating month, day, or year. Any month or day whose number does not take two digits must be entered with a leading zero. For example, March 3, 1979 is entered as 030379. Dates are always redisplayed with punctuation after entry has been completed; 03/03/77 in the example.

Whenever a yes-or-no question is asked, such as ENTRY CORRECT?, **a keyin of one character will be requested. The standard in this system is for a '1' to represent "yes", and a '0' or 'N' to represent "no".**

The standard delete code is DEL. If anything other than DEL is entered when you are asked to enter a delete code, the deletion will not take place.

SFK

SFK refers to a Special Function Key, one of 16 numbered keys whose function is defined in a program. **SFK15 is defined in almost every program. Its only purpose is as a program exit.** Exit from every program is possible through use of SFK15; in case your system does not include programmable SFK's, other exit procedures are provided. Note that any SFK entry is not terminated by pressing the RETURN key; its function begins immediately after the key is pressed.

BULLETINS

The fourth line of the CRT is reserved for the display of a bulletin. A bulletin is a short message, flashed three times, describing what is going on in the program. Some bulletins are referred to as error messages because they describe an error on your part.

All keyin mode entries are tested for validity. This test includes a check for non-numeric characters in a numeric entry, as well as a number range check for numeric entries. When some sort of unacceptable entry is discovered by this test, the bulletin **OUT OF RANGE** will flash. In the case of numeric entry, this bulletin signals either a number which is too large or too small, or not all numeric characters. The CRT cursor will be repositioned to the first of the string of asterisks, which have replaced the unacceptable entry, and the program will await another keyin. The validity test is repeated for each keyin until you make an acceptable entry.

Although the most frequent bulletin which will be displayed is OUT OF RANGE, there are a number of other bulletins which may be flashed from time to time. Some of these are **INVALID DATE, NOT ON FILE, RECORDED** and **DELETED**. These bulletins serve as warnings or status messages during the course of the program. Whenever the bulletin identifies unacceptable entry, such as INVALID DATE, the cursor is repositioned to the same entry field and awaits another entry. If a bulletin serves as a status message, the program continues after the bulletin has been flashed.

There are two program status messages which deserve special mention but are not flashed as bulletins. One is:

PROCESSING. . . DO NOT INTERRUPT

This message signifies a process taking place in computer memory which involves no user action or CRT display.

The other message describes the process of one program loading another. This process occurs during the Menu program, and the program displays:

LOADING PROGRAM #

A similar message is displayed at the end of each program when the Menu is being loaded. For example, when the Menu is being loaded from the General Ledger Direct Posting program, the following is displayed during this process:

G/L DIRECT POSTING LOADING MENU

Be patient. When these messages appear there is something going on even though you can't see it on the CRT. Pressing keys and flipping switches will do harm; the messages appear because the processes take time.

USING THE PRINTER

Another message which does not take the flashing form is:

PRINTER NOT READY

In all programs where the printer is used, there is a test to make sure the printer is turned on

and ready to print. If it is not, the program waits with the **PRINTER NOT READY** message displayed on the screen until the printer is turned on. When this message appears, there is no way to continue or even exit the program without turning the printer on. Once the printer is turned on, the message is cleared from the screen and the program continues. **Do not turn the printer off just because the message no longer appears on the screen; if you do, your program will undoubtedly hang at some point, waiting to be able to print on the printer.**

FLOWCHARTS

Flowcharts are provided with each program following the step-by-step user instructions. Flowcharts are a schematic guide to the action of a program. Once you are familiar with the operation of this General Ledger system, the flowcharts will serve as a quick reference to program use.

Each flowchart symbol describes a logical step in a program from the user's point of view. Different symbols represent different kinds of steps. Table 4-A explains the general meaning of each symbol. In the actual flowcharts, the text inside each symbol describes the step in more detail. The 'Ø' symbol is used in the flowchart text and throughout the chapter to signify a blank.

Connectors are used to connect one point in a flowchart to another, thus avoiding the maze that can be created by too many crossing arrows. For the purposes of this book we have formulated three connectors: Intra-program, SFK and Inter-program connectors.



Intra-program connector, coded by letters of the alphabet. This connector connects points within a program.



SFK connector, coded by SFK numbers.



Inter-program connector, coded by program numbers. This connector connects a program to another program. It is applicable only if your computer system allows for loading of programs by another program.

Table 4-A. Flowchart Symbols Key

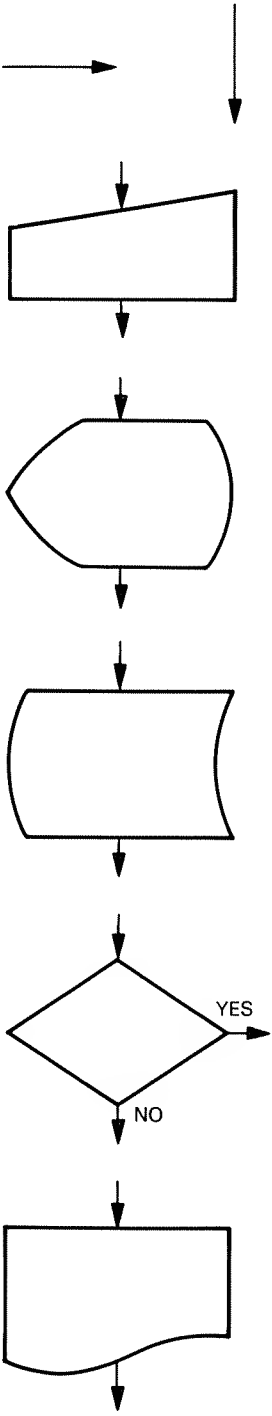
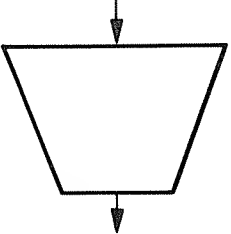
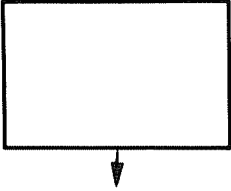
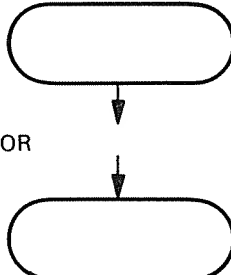

| Symbol | Description |
|---|---|
|  <p>The 'Symbol' column contains a vertical sequence of six flowchart symbols, each preceded by a downward-pointing arrow. The symbols are: 1. A horizontal arrow pointing right, labeled 'ARROW'. 2. A parallelogram with a slanted top-left side, labeled 'USER INPUT'. 3. A rounded rectangle, labeled 'DISPLAY'. 4. A rectangle with wavy left and right sides, labeled 'DISK ACTION'. 5. A diamond shape, labeled 'DECISION', with an arrow exiting the right side labeled 'YES' and an arrow exiting the bottom side labeled 'NO'. 6. A rectangle with a wavy bottom side, labeled 'PRINTOUT', with a downward arrow exiting from its bottom.</p> | <p>Designates direction of program flow.</p> <p>Keyboard entry.</p> <p>Describes or quotes what is displayed on CRT screen Quotes are shown in bold type, all capitals.</p> <p>Describes an action taking place on disk drive; do not interrupt program during this process.</p> <p>Direction of program flow determined by a "yes" or "no" answer to the enclosed question</p> <p>Report printed by printer on standard paper.</p> |

Table 4-A. Flowchart Symbols Key (Continued)

| Symbol | Description |
|--|---|
|  <p>USER INSTRUCTIONS</p> | <p>The operator must perform a duty outside of program.</p> |
|  <p>PROCESS,NOTE</p> | <p>Describes a program action, or may contain a note to the user.</p> |
|  <p>OR</p> <p>TERMINAL</p> | <p>Designates program start, program end, or return to main program.</p> |
|  <p>OR</p> <p>CONNECTOR</p> | <p>Continue program at matching code (note direction of arrow). Connector circles in regular weight are incoming connectors (flow transfers TO the connector). Connector circles in bold weight are outgoing connectors (flow transfers FROM the connector).</p> |

START AND END

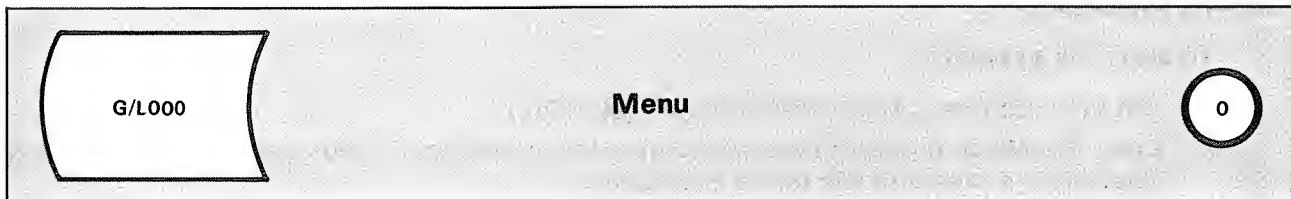
To start the system:

- 1. Put your General Ledger disk in your disk drive.**
- 2. Load the Menu program into your computer according to your system's instructions. The Menu's standard file name is G/L000.**
- 3. Run the Menu program.**

Note: If your system cannot load and run one program from another program, you will have to load and run each General Ledger program manually. If such is the case, the Menu program cannot be used except as a printed guide to program selection. Remember to clear each program before you load another. Before you clear a program, make sure it has finished all processing.

To end processing:

- 1. When the day's transactions are completed, make any backup disks you keep from your working disks.**
- 2. Clear the last program on the screen from your computer's memory.** If you use the Menu program, you should always clear the entire system with that program in memory.



PURPOSE: Allow program selection, then automatically load and run selected program.
WHEN: To begin processing and automatically at the end of every program. All programs should be loaded by the Menu if possible.
TO EXIT: Menu must be cleared manually.

CRT 0-1

```
G/L PROGRAM SELECTION MENU
ENTER PASSWORD
xxxx
<bulletin>
1) GENERAL INFORMATION F/M
2) DIRECT POSTING
3) POSTING UPDATE
4) REPORTS
5) ACCOUNT FILE MAINTENANCE
6) ACCOUNT FILE REORGANIZE
```

d = display only, x = enter only, z = enter or display with option to change

LOAD MENU

- 1) Load the Menu program according to your system instructions.

When running the program manually, the initial Menu is displayed as CRT 0-1.

PASSWORD

2) Enter your password.

This system is password protected. If the characters you enter do not equal your password, the bulletin WRONG PASSWORD is flashed on the screen. You must re-enter the password until the correct password is entered; repeat this step.

Otherwise, proceed to step 3.

CRT 0-2

```
G/L PROGRAM SELECTION MENU
CHOOSE PROGRAM BY NUMBER
xx
<bulletin>
1) GENERAL INFORMATION F/M
2) DIRECT POSTING
3) POSTING UPDATE
4) REPORTS
5) ACCOUNT FILE MAINTENANCE
6) ACCOUNT FILE REORGANIZE
```

d = display only, x = enter only, z = enter or display with option to change

PROGRAM SELECTION

After successful entry of the password, or when the Menu is loaded automatically, the display appears as CRT 0-2.

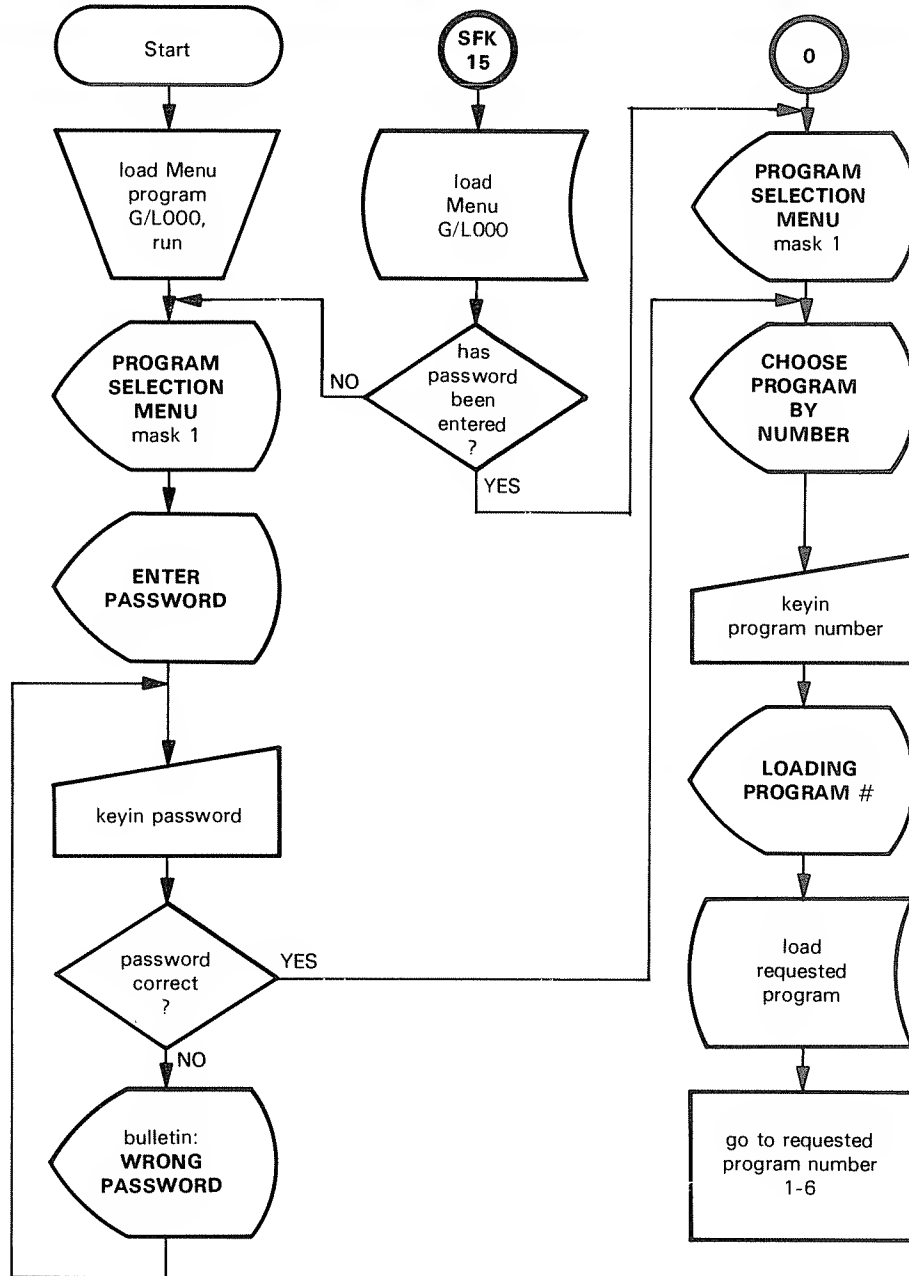
3) Enter program number (1 - 6).

When an acceptable program number has been entered, the following message is displayed on the fourth line of the Menu display:

```
-- > LOADING PROGRAM #
```

The Menu is now loading the requested program. Be patient. Some programs are lengthy and take some time to load into the computer memory. The CRT display will not change until the next program is loaded and run.

MENU G/L000



TO EXIT: Enter a field to change of '0', or SFK15 any time.

The initial display appears as CRT 1-1. When entering information for the first time, it must be entered as a "change".

Changes

1) Enter field number (0-16).

0 - EXIT. Program ends The Menu is loaded

1-15 - Request to change the value at this field. Enter a new value when requested See Table 1-1 for field details When entry is complete, repeat this step

16 - PRINT. Print the General Information data for the currently displayed company To prepare for this operation, load standard paper into the printer, then make sure the printer is turned on and ready to print When the report is completed, you may make more changes, repeat this step

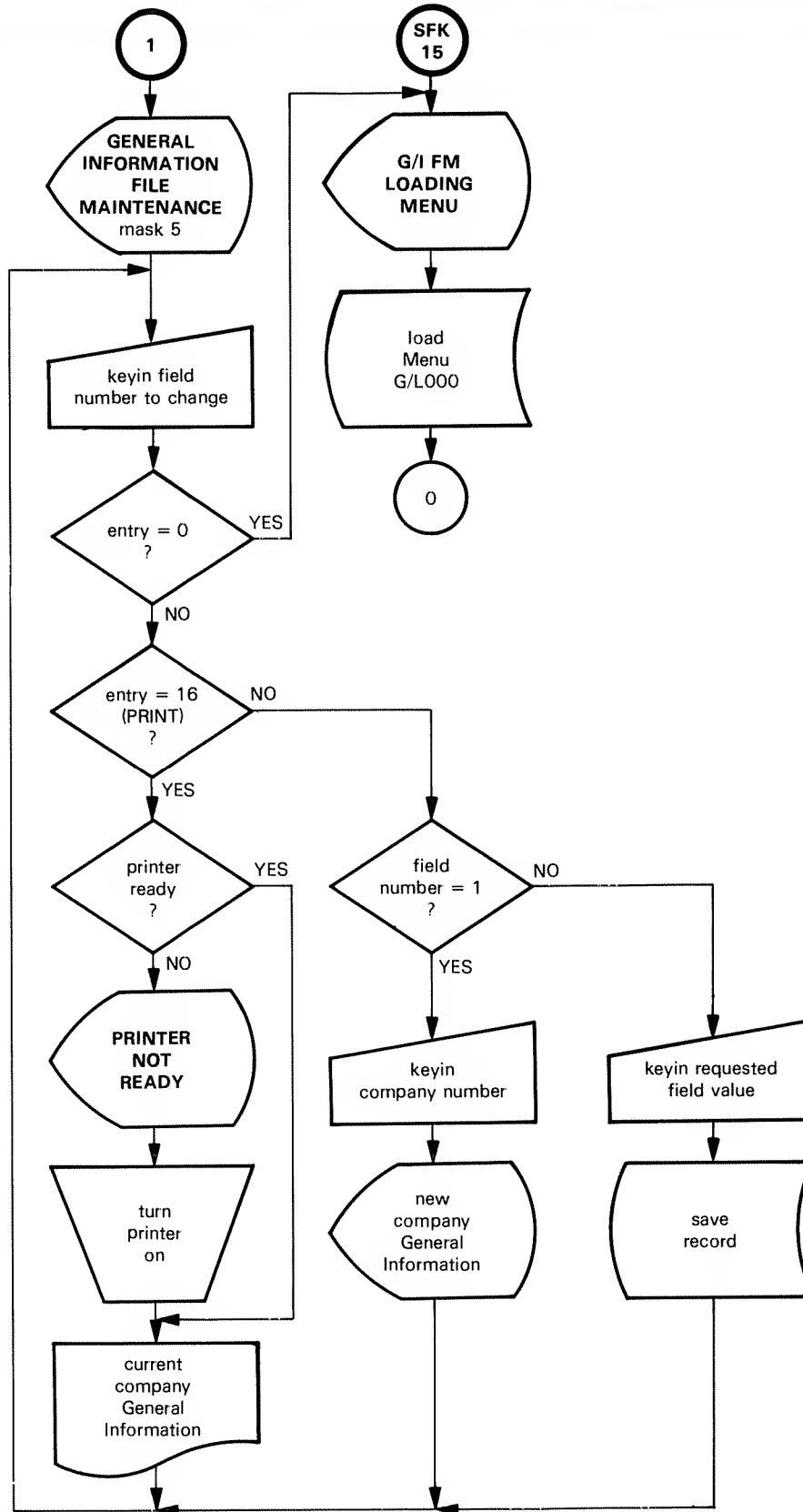
Table 1-1 General Information Fields

| Field | Description |
|-------|--|
| 1 | COMPANY NUMBER (1-10). Display General Information for this company. Accounts Payable, Accounts Receivable and General Ledger use only company number '1'. |
| 2 | NEXT P/R CHECK (1-999999). Used for Payroll. |
| 3 | OVERTIME RATE (0-99.99). Used for Payroll. |
| 4 | HOURLY RATE (0-99.99) Used for Payroll |
| 5 | FISCAL YEAR ENDS (1-12). Month the fiscal year ends |
| 6 | COMPANY NAME (24 characters). |
| 7,8,9 | COMPANY ADDRESS (three lines, 24 characters each) |
| 10 | FEDERAL/STATE NUMBERS (24 characters). Enter Federal and State tax identification numbers on this line. The first 12 characters are intended for the federal number, the latter 12 characters for the state number. |
| 11 | TODAY'S DATE. Change daily or as needed |
| 12 | PERIOD START DATE. Used for Payroll |
| 13 | PERIOD END DATE. Used for Payroll. |
| 14 | PAYROLL NUMBER (1-2). Used for Payroll. |
| 15 | DAY NUMBER (1-14) Used for Payroll. |

A sample General Information report is shown in Report 1-1

Report 1-1. General Information File Maintenance

| | | | | | |
|--------------------------------------|--|-----------------------|-------|----------------|------------------|
| IMPRESSIVE PRODUCTS | | | | DATE 05/31/78 | |
| GENERAL INFORMATION FILE MAINTENANCE | | | | PAGE 1 | |
| | | | | | |
| PERIOD START | | 05/16/78 | | | |
| PERIOD END | | 05/31/78 | | | |
| PAYROLL NUMBER | | 02 | | | |
| DAY NUMBER | | 10 | | | |
| | | | | | |
| COMPANY CODE 1 | | NEXT CHECK NO. | 51247 | O.T. RATE 1.50 | HOURLY RATE 0.00 |
| COMPANY NAME IMPRESSIVE PRODUCTS | | FISCAL YR ENDS 12 | | | |
| ADDRESS 356 BUSINESS STREET | | FED/STATE TAX NUMBERS | | 91-1111111-A | 137 456789 |
| | | PARODICE, CALIFORNIA | | 94710 | |



PURPOSE: Enter direct postings to General Ledger accounts, and optionally print these postings.

WHEN: Daily or as needed.

TO EXIT: Enter an operation code of '0', or SFK15 any time.

Any General Ledger postings which are not made through Payroll, Accounts Payable or Accounts Receivable (external postings) must be entered using this program. This program will also be used to adjust account totals when balance errors are being corrected.

Any Posting records created will remain on the Direct Posting file until General Ledger Update is run. You may print the contents of the Direct Posting file at any time by selecting the PRINT operation in this program.

Whenever you create a Posting record, the program checks the contents of the Direct Posting and External Posting files. If the Direct Posting file is filled to its limit, or if the External Posting file will be filled to its limit when the Direct Posting records are added to it during the General Ledger Update program, the program stops with this message displayed on the screen:

FILE FULL - RUN G/L UPDATE
KEY <CONTINUE> <RETURN> TO EXIT

Key [CONTINUE] and [RETURN]; the Menu will be loaded. Select and run the G/L Update program. When it is completed, re-select Direct Posting Entry/Print and continue entering your batch of postings.

The initial display for this program appears as CRT 2-1.

CRT 2-1

```
G/L DIRECT POSTING ENTRY/PRINT
ENTER OPERATION (0=EXIT, 1=POST, 2=PRINT)
x
<bulletin>
ACCOUNT xxxxxx <account name>
1)DATE          zz/zz          <account type>
2)REFERENCE     zzzzzz        OPENING BALANCE    xxxxxx.xx
3)AMOUNT        zzzzzzzzzzzz   CLOSING BALANCE    xxxxxx.xx
```

d = display only, x = enter only, z = enter or display with option to change

SELECT OPERATION

```
G/L DIRECT POSTING ENTRY/PRINT
ENTER OPERATION (0=EXIT; 1=POST; 2=PRINT)
```

1) Enter operation code (0-2).

- 0 - EXIT.** Program ends The Menu is loaded
- 1 - POST.** Request to enter a direct posting to a General Ledger account, proceed to step 2
- 2 - PRINT.** Print current Direct Posting records; proceed to step 5

OPERATION IS POST

You may only post amounts to General Ledger accounts which are established on the Account file.

2) Enter account number (0-99999.9)

- 0 - POST operation complete.** A new operation is requested, return to step 1
- General Ledger number - Request to post an amount to this General Ledger account.** A check is made to see if the requested General Ledger account is on the Account file
 - If yes, the account name, date, opening balance and account description are displayed on a screen similar to CRT 2-1 You may continue with the requested operation, proceed to step 3
 - If no, the bulletin NOT ON FILE is flashed The account number must be on the Account file before a direct posting may be entered for that account A new account number is requested, repeat this step

DIRECT POSTINGS DATA

If you discover at this point that you have entered the wrong account number, you must enter any fictitious postings data, and then select a final action (step 4) of 4 - CANCEL. Then re-enter the account number as needed.

3) Enter field values as requested. See Table 2-1 for field details. Initially, the posting Date field is set to today's date (from the General Information file) by the program. The Reference field and Amount field values are requested automatically.

When a value has been entered for each field, you may change any field values just entered and also the date at field 1, proceed to step 4

Table 2-1 Direct Posting Fields

| Field | Description |
|-------|--|
| 1 | DATE (MMDD). The date of this posting entry. Note that you enter only the month and day (MMDD), and not the year. If you enter a '0' or 0 at this field, today's date from the General Information file will be used automatically. |
| 2 | REFERENCE (0-999999). Invoice number or other reference code. |
| 3 | AMOUNT (-9999999.99 - +9999999.99). Amount of direct posting. The closing balance will be adjusted and displayed according to this posting amount |

CORRECTIONS

ENTER FIELD TO CHANGE (0=NONE; 4=CANCEL)

4) Enter field number to change (0-4)

0 - No changes, save this record. The bulletin RECORDED is flashed when this record is saved on the Direct Posting file. A new account number is requested, return to step 2

1-3 - Change value of requested field. See Table 2-1 for field details. A new closing balance is calculated and displayed with any change to the amount at field 3. Repeat this step

4 - CANCEL. This record is not saved on the Direct Posting file. A new account number is requested, return to step 2

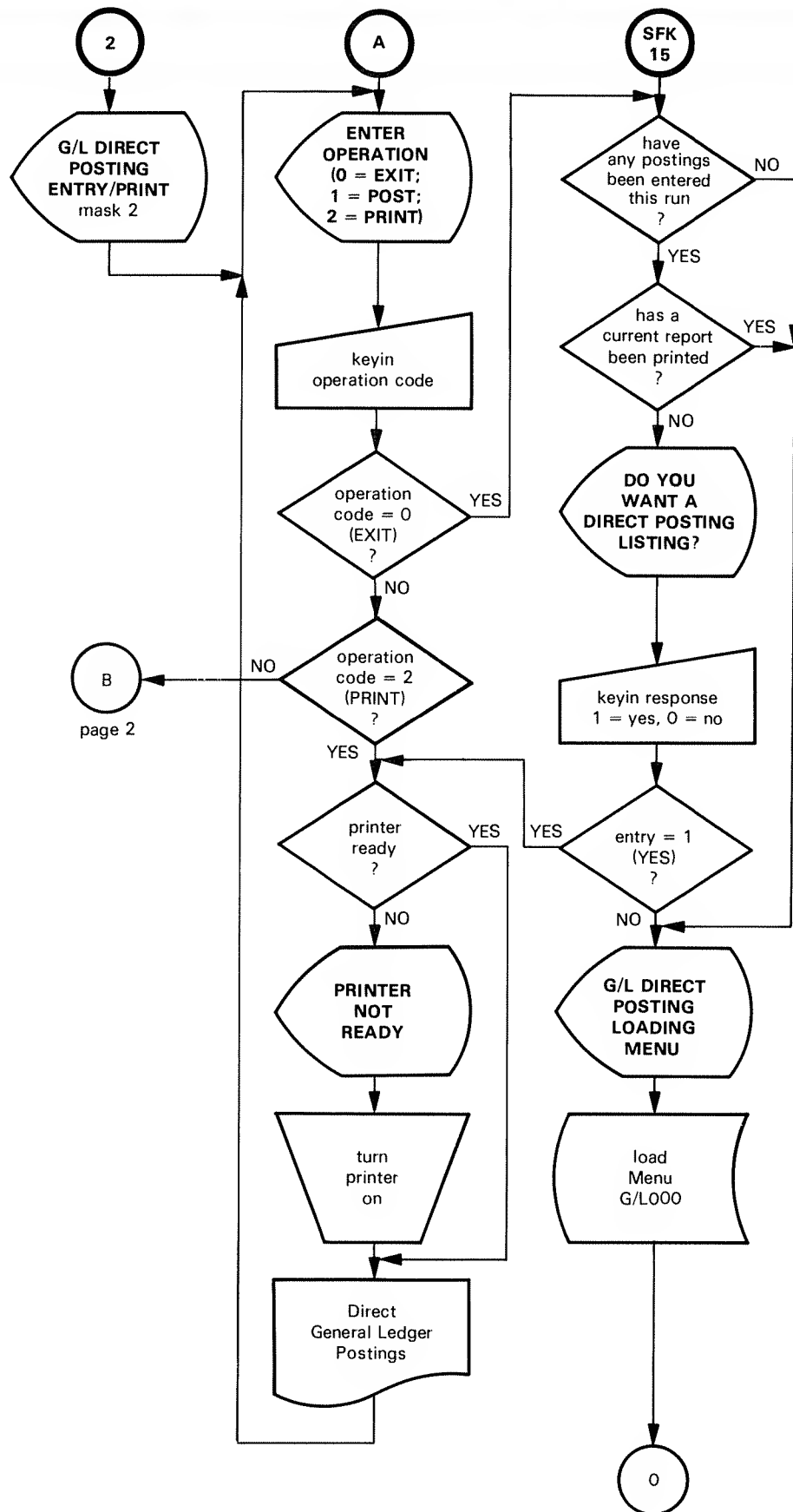
5) OPERATION IS PRINT

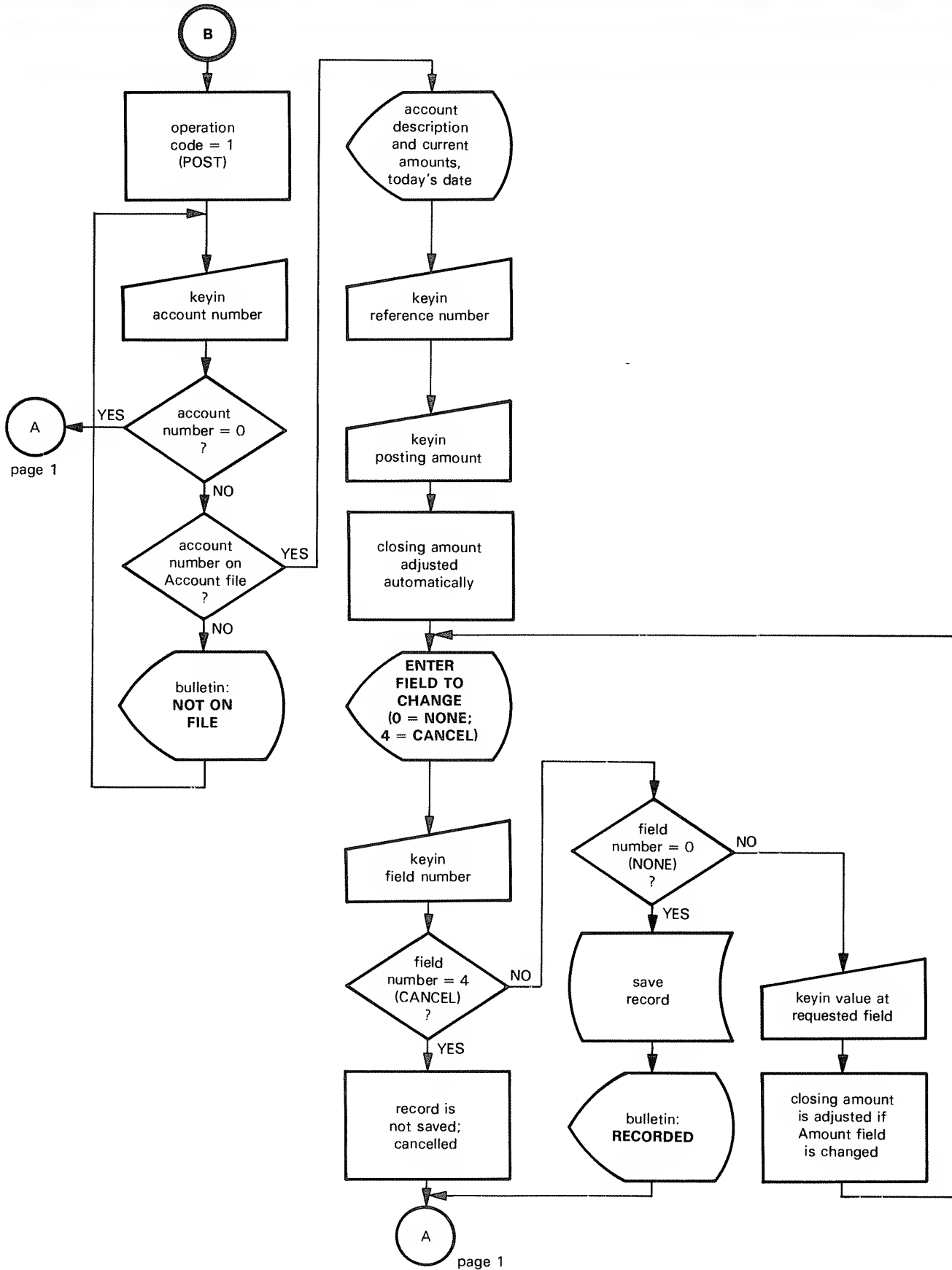
The print operation begins immediately once the operation is requested. To prepare for the print operation, load standard paper into the printer, then make sure the printer is turned on and ready to print. The entire Direct Posting file is printed. When the report is completed, another operation is requested; return to step 1.

A sample Direct General Ledger Postings report is shown in Report 2-1

Report 2-1. Direct General Ledger Postings

| IMPRESSIVE PRODUCTS DIRECT GENERAL LEDGER POSTINGS | | | | | | | | | | DATE 05/31/78 PAGE 1 | |
|---|--------|-------|-----|---------|-------|---------|--------|------|-----|-------------------------|-------|
| ACCOUNT | SOURCE | DATE | REF | AMOUNT | ----- | ACCOUNT | SOURCE | DATE | REF | AMOUNT | |
| 43110.0 | 3 | 10/12 | 0 | 0.00 | ----- | 43730.0 | 3 | 9/22 | 22 | -3.00 | ----- |
| 43750.0 | 3 | 9/22 | 24 | -4.00 | ----- | 31110.0 | 3 | 9/22 | 123 | 100000.00 | ----- |
| 31110.0 | 3 | 5/31 | 0 | 903.77 | ----- | 31320.0 | 3 | 5/31 | 0 | 7383.81 | ----- |
| 41300.0 | 3 | 5/31 | 0 | 592.44 | ----- | 43340.0 | 3 | 5/31 | 0 | 3320.00 | ----- |
| 43510.0 | 3 | 5/31 | 0 | 2026.00 | ----- | 43530.0 | 3 | 5/31 | 0 | 264.89 | ----- |
| 43590.0 | 3 | 5/31 | 0 | 994.00 | ----- | 31590.0 | 3 | 5/31 | 0 | 1002.00 | ----- |
| 43340.0 | 3 | 5/31 | 0 | 320.00 | ----- | 43410.0 | 3 | 5/31 | 0 | 926.00 | ----- |
| 43530.0 | 3 | 5/31 | 0 | 264.89 | ----- | | | | | | |
| 22 TOTAL DIRECT POSTINGS | | | | | | | | | | \$173031.58 | |





PURPOSE: Update direct postings and external postings to the General Ledger Account file.
WHEN: Daily or as needed, and always before printing reports at the end of the month.
TO EXIT: Enter initial response of 'END', or SFK15 any time.

This program sorts and then updates direct postings and external postings to the Account file. It also clears both the Direct Posting and External Posting files.

You will always run this program before printing reports, to ensure that your most recent postings are included in these reports.

You must also run Update when either the Direct Posting or External Posting file is full. This "file full" condition will be detected during the Direct Posting Entry program. To recover from this situation you must run Update in order to clear the files. Once the files are cleared you may return to Direct Posting Entry and resume entering postings. Similarly, if the External Posting file is found full during Accounts Payable or Accounts Receivable processing, run this G/L Update program to clear it. Then return to your Accounts Payable or Accounts Receivable program and resume processing.

G/L Posting Sort/Update involves two separate programs. The first program sorts the postings on the Direct Posting and External Posting files. The postings from both files are then merged together onto the External Posting file, and the Direct Posting file is cleared. When the sort is complete, the first program automatically loads the second program.

The second program updates all the postings to the appropriate Account records in the Account file. An account-by-account Update activity report is printed during the Update program. When the update is complete, the External Posting file is cleared, and the Menu is loaded.

Inspect the Update activity report for posting errors (see discussion in Chapter 3, Errors and Error Recovery). If you discover errors, correct them using Direct Posting Entry, or Account File Maintenance, if necessary. Then re-run Update before printing reports.

To prepare for this program load standard paper into the printer, then make sure the printer is turned on and ready to print

START OR END

This program requires virtually no user action; you need only tell it when to begin.

G/L POSTINGS SORT/UPDATE
KEY RETURN TO BEGIN; ENTER 'END' TO EXIT.

1) Start or end program.

RETURN - Continue Sort/Update programs. When all posting records have been sorted and updated to the General Ledger Account File and the G/L Update activity report is printed, the program ends and the Menu is loaded.

END - EXIT Program ends. The Menu is loaded.

The Sort program involves no user action. There are, however, certain status messages displayed on the screen to let you know where the program is within the sort, and how the sort is progressing. Initially, the Sort program will display the following message:

WORKING. DO NOT INTERRUPT

If there are no records located on the Direct Posting or the External Posting files, the message NO RECORDS is displayed. The Sort program then loads the Menu, since there is no reason to proceed with the update.

When posting records are located on either or both of the posting files, the program first sorts the Direct Posting file. The first sort status message reads:

MAX NUMBER OF RECORDS: ##

The number displayed here is the total number of records on both the Direct Posting and External Posting files. While the actual sort takes place the following message is displayed

SORT DIRECT POSTINGS

When this Direct Posting sort is complete, the External Posting file is sorted. The sort message reads:

SORT EXTERNAL POSTINGS

During the sort, each of the two posting files is saved in blocks on the Work file. If more than one block of records is saved, these messages are displayed as each block of records is saved:

RECORD NUMBER: *m*

BLOCKS SORTED: *n*

m is the number of records saved on the Work file so far. *n* is the number of blocks sorted. After all blocks of records are sorted and saved they must be merged together onto the External Posting file in their final order. During this process, the following message is displayed.

MERGE SORTED BLOCKS

Records from each block on the Work file are merged and saved, sector by sector, onto the External Posting file. As each sector is saved, the activity is followed by the following message:

RECORD NUMBER: *n*

As each sector of records is saved, *n* is incremented by the number of records saved. When the sort is complete, the program displays this message:

SORT COMPLETE

At the completion of the Sort program, your screen display will appear similar to CRT 3-1.

CRT 3-1

```
G/L POSTING SORT/UPDATE
KEY RETURN TO BEGIN; ENTER 'END' TO EXIT
WORKING...DO NOT INTERRUPT
MAX NUMBER OF RECORDS:      dd
MERGE SORTED BLOCKS
RECORD NUMBER:              dd

BLOCKS SORTED:              dd

SORT COMPLETE
```

d = display only, x = enter only, z = enter or display with option to change

The Sort program then loads the Posting Update program. The screen display is cleared and the following title displayed:

```
GENERAL LEDGER UPDATE
PROCESSING...DO NOT INTERRUPT
```

The update process begins immediately. An Update activity report is printed during the update process, so make sure your printer is turned on and ready to print.

When all postings have been updated to the Account file and the G/L Update report has finished printing, the program ends and the Menu is loaded.

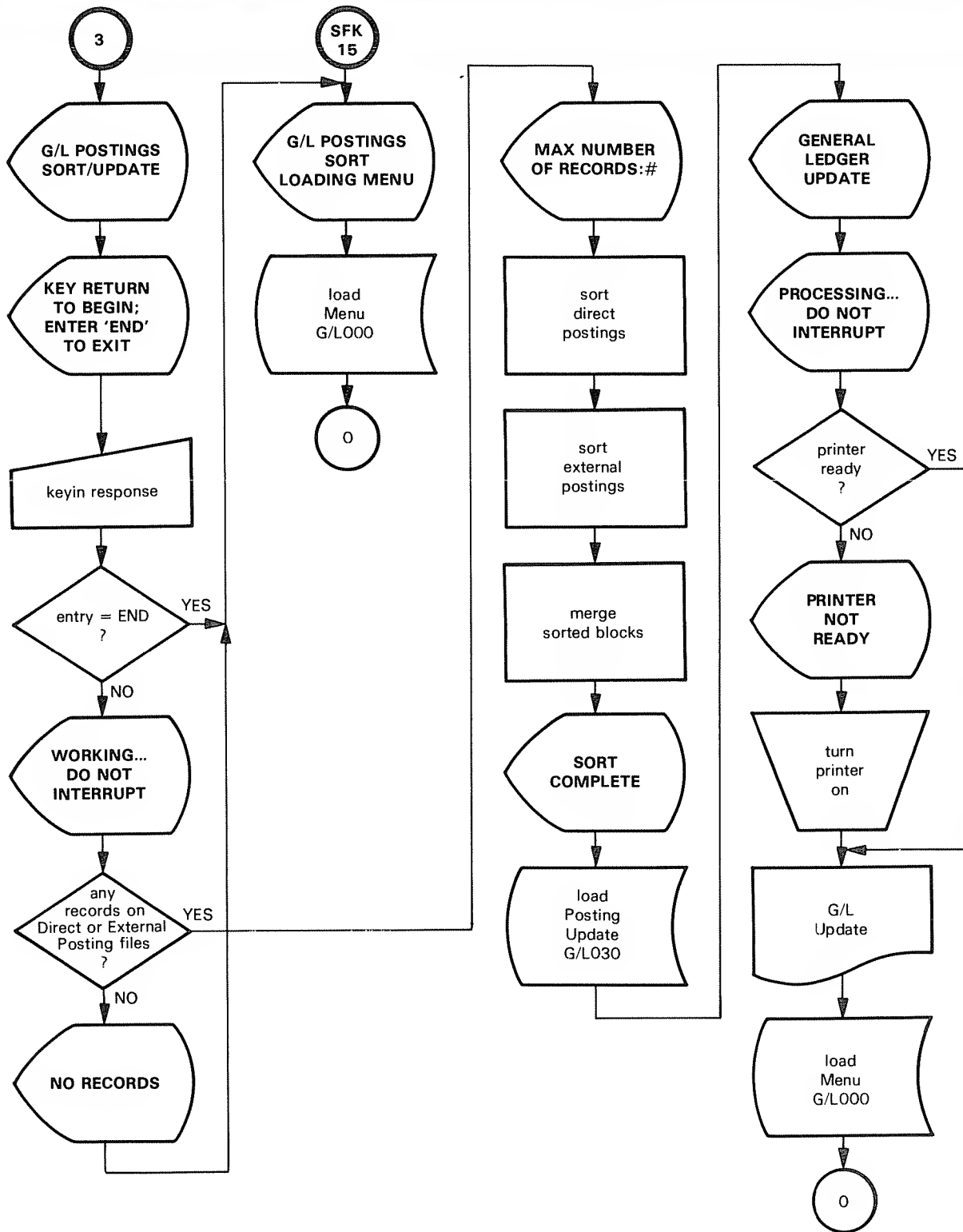
A sample G/L Update report is shown in Report 3-1. An error report, which prints at the end of the Update report, is shown in Report 3-2.

Report 3-1. G/L Update

| IMPRESSIVE PRODUCTS G/L UPDATE | | | | | | | | | | DATE 05/31/78 PAGE 1 | | | | | | |
|-----------------------------------|------|-----------|-----------|------------|------|-----------|--------|------------|------|--------------------------|--------|-------------|---|-----------|--------|----------|
| ACCT | SRCE | DATE | REF | AMOUNT:: | SRCE | DATE | REF | AMOUNT:: | SRCE | DATE | REF | AMOUNT | | | | |
| 11110.0 | 1 | 9/ 8 | 41 | 110.00:: | 1 | 9/19 | 71151 | 120.00:: | 1 | 9/20 | 42 | 120.00:: | 1 | 9/28 | 71290 | 120.00 |
| | 1 | 10/18 | 71437 | 140.00:: | 1 | 10/31 | 71449 | 175.00:: | 1 | 10/31 | 71568 | 190.00:: | 1 | 10/31 | 71713 | 200.00 |
| | 1 | 11/13 | 71671 | 100.00:: | 1 | 11/29 | 71822 | 70.00:: | 3 | 9/22 | 456 | 50000.00:: | | | | |
| REVENUE BANK | | | | P/R 0 | | A/P 10 | | A/R 0 | | G/L 1 | | OPENING BAL | | 20235.25 | | |
| NET CHANGE | | 51345.00 | | 0.00 | | 1345.00 | | 0.00 | | 50000.00 | | CLOSING BAL | | 71580.25 | | |
| 11420.0 | 1 | 9/19 | 532 | 150.00:: | 1 | 9/20 | 7850 | 100.00:: | 1 | 9/25 | 589 | 100.00:: | 1 | 9/26 | 7844 | -250.00 |
| | 1 | 9/26 | 7847 | -250.00:: | 1 | 9/28 | 71250 | 440.00:: | 1 | 9/28 | 71251 | 100.00:: | 1 | 10/13 | 49 | 40.00 |
| | 1 | 10/13 | 614 | 1000.00:: | 1 | 10/13 | 621 | 1282.00:: | 1 | 10/13 | 622 | 500.00:: | 1 | 10/13 | 645 | 1000.00 |
| | 1 | 10/13 | 71319 | -100.00:: | 1 | 10/31 | 642 | 75.00:: | 1 | 10/31 | 643 | 125.00:: | 1 | 10/31 | 671 | 100.00 |
| | 1 | 10/31 | 672 | 150.00:: | 1 | 10/31 | 673 | 150.00:: | 1 | 10/31 | 674 | 150.00:: | 1 | 10/31 | 675 | 150.00 |
| | 1 | 10/31 | 676 | 150.00:: | 1 | 11/ 7 | 688 | 200.00:: | 1 | 11/ 7 | 692 | 75.00:: | 1 | 11/13 | 698 | 150.00 |
| | 1 | 11/13 | 699 | 150.00:: | 1 | 11/13 | 700 | 100.00:: | 1 | 11/13 | 701 | 100.00:: | 1 | 11/15 | 7856 | -150.00 |
| | 1 | 11/15 | 103078 | -992.00:: | 1 | 11/15 | 110778 | -100.00:: | 1 | 11/22 | 7860 | -150.00:: | 1 | 11/28 | 71747 | 500.00 |
| | 1 | 11/29 | 7864 | -150.00:: | 1 | 11/29 | 7867 | -100.00:: | 1 | 11/29 | 7870 | -150.00:: | | | | |
| EMPLOYEE RECEIVABLES | | | | P/R 0 | | A/P 35 | | A/R 0 | | G/L 0 | | OPENING BAL | | 1030.00 | | |
| NET CHANGE | | 4645.00 | | 0.00 | | 4645.00 | | 0.00 | | 0.00 | | CLOSING BAL | | 5675.00 | | |
| 11610.0 | 1 | 9/17 | 1548 | 14378.02:: | 1 | 10/31 | 1548 | 14378.02:: | 1 | 10/31 | 1548 | -14378.02:: | 1 | 10/31 | 8771 | 16865.05 |
| | 1 | 10/31 | 8772 | 8278.95:: | 1 | 10/31 | 111778 | 50000.00:: | 1 | 10/31 | 251574 | 14463.52:: | | | | |
| FINISHED GOODS (AT MFG. COST) | | | | P/R 0 | | A/P 7 | | A/R 0 | | G/L 0 | | OPENING BAL | | 266195.00 | | |
| NET CHANGE | | 103985.54 | | 0.00 | | 103985.54 | | 0.00 | | 0.00 | | CLOSING BAL | | 370180.54 | | |
| 11630.0 | 1 | 10/31 | 22741 | 451.94:: | 1 | 11/22 | 781287 | 111.83:: | | | | | | | | |
| OTHER INVENTORY | | | | P/R 0 | | A/P 2 | | A/R 0 | | G/L 0 | | OPENING BAL | | 0.00 | | |
| NET CHANGE | | 563.77 | | 0.00 | | 563.77 | | 0.00 | | 0.00 | | CLOSING BAL | | 563.77 | | |
| 11820.0 | 1 | 9/19 | 71224 | 1366.23:: | 1 | 9/28 | 7107 | 1366.23:: | 1 | 9/28 | 71306 | 775.40:: | 1 | 10/31 | 71711 | 1300.00 |
| | 1 | 10/31 | 71712 | 1600.00:: | 1 | 11/ 7 | 135772 | 536.23:: | | | | | | | | |
| PREPAID TAXES | | | | P/R 0 | | A/P 6 | | A/R 0 | | G/L 0 | | OPENING BAL | | 0.00 | | |
| NET CHANGE | | 6944.09 | | 0.00 | | 6944.09 | | 0.00 | | 0.00 | | CLOSING BAL | | 6944.09 | | |
| 11890.0 | 1 | 11/22 | 2111 | 1998.00:: | 1 | 11/29 | 2111 | 1998.00:: | | | | | | | | |
| OTHER PREPAID EXPENSES | | | | P/R 0 | | A/P 2 | | A/R 0 | | G/L 0 | | OPENING BAL | | 63.50 | | |
| NET CHANGE | | 3996.00 | | 0.00 | | 3996.00 | | 0.00 | | 0.00 | | CLOSING BAL | | 4059.50 | | |
| 1S110.0 | 1 | 9/17 | 8241 | 1917.00:: | 1 | 9/26 | 8375 | 1331.25:: | 1 | 9/30 | 87326 | 428.68:: | 1 | 10/31 | 51032 | 304.93 |
| | 1 | 10/31 | 64567 | 457.40:: | 1 | 10/31 | 71534 | 233.88:: | 1 | 11/28 | 7136 | 180.24:: | 1 | 11/29 | 64567 | -228.70 |
| | 1 | 11/29 | 645670 | 228.70:: | | | | | | | | | | | | |
| MACHINERY & EQUIPMENT | | | | P/R 0 | | A/P 9 | | A/R 0 | | G/L 0 | | OPENING BAL | | 350000.00 | | |
| NET CHANGE | | 4853.38 | | 0.00 | | 4853.38 | | 0.00 | | 0.00 | | CLOSING BAL | | 350000.00 | | |
| IMPRESSIVE PRODUCTS G/L UPDATE | | | | | | | | | | DATE 05/31/78 PAGE 2 | | | | | | |
| ACCT | SRCE | DATE | REF | AMOUNT:: | SRCE | DATE | REF | AMOUNT:: | SRCE | DATE | REF | AMOUNT | | | | |
| 1S120.0 | 1 | 8/30 | 6066 | 127.53:: | 1 | 10/13 | 71308 | 166.14:: | 1 | 10/31 | 6964 | 500.55:: | 1 | 11/13 | 33531 | 378.08 |
| | | | | | | | | | | | | OPENING BAL | | 30000.00 | | |
| IMPRESSIVE PRODUCTS G/L UPDATE | | | | | | | | | | DATE 05/31/78 PAGE 3 | | | | | | |
| IMPRESSIVE PRODUCTS G/L UPDATE | | | | | | | | | | DATE 05/31/78 | | | | | | |
| IMPRESSIVE PRODUCTS G/L UPDATE | | | | | | | | | | DATE 05/31/78 | | | | | | |
| IMPRESSIVE PRODUCTS G/L UPDATE | | | | | | | | | | DATE 05/31/78 | | | | | | |
| IMPRESSIVE PRODUCTS G/L UPDATE | | | | | | | | | | DATE 05/31/78 | | | | | | |
| IMPRESSIVE PRODUCTS G/L UPDATE | | | | | | | | | | DATE 05/31/78 PAGE 9 | | | | | | |
| IMPRESSIVE PRODUCTS G/L UPDATE | | | | | | | | | | DATE 05/31/78 PAGE 10 | | | | | | |
| ACCT | SRCE | DATE | REF | AMOUNT:: | SRCE | DATE | REF | AMOUNT:: | SRCE | DATE | REF | AMOUNT | | | | |
| 43790.0 | 1 | 9/19 | 71152 | 69.19:: | 1 | 9/20 | 71228 | 31.00:: | 1 | 9/20 | 71231 | 65.00:: | 1 | 9/20 | 71232 | 65.00 |
| | 1 | 9/28 | 71255 | 28.30:: | 1 | 10/31 | 71714 | 28.17:: | 1 | 11/ 7 | 71572 | 20.00:: | 1 | 11/13 | 71670 | 92.47 |
| | 1 | 11/15 | 111578 | 48.00:: | 1 | 11/29 | 71823 | 105.35:: | | | | | | | | |
| MISCELLANEOUS | | | | P/R 0 | | A/P 10 | | A/R 0 | | G/L 0 | | OPENING BAL | | 56.24 | | |
| NET CHANGE | | 552.48 | | 0.00 | | 552.48 | | 0.00 | | 0.00 | | CLOSING BAL | | 608.72 | | |
| 44200.0 | 1 | 9/12 | 5707 | 1.21:: | 1 | 9/19 | 71191 | 1786.49:: | 1 | 9/28 | 71252 | 61.37:: | 1 | 9/30 | 8660 | 489.46 |
| | 1 | 9/30 | 100178 | 3.67:: | 1 | 10/31 | 71495 | 1750.31:: | 1 | 10/31 | 102078 | 3.67:: | 1 | 10/31 | 103178 | 138.95 |
| | 1 | 11/ 7 | 71571 | 306.25:: | 1 | 11/ 7 | 103178 | -138.95:: | 1 | 11/15 | 110178 | 2.56:: | 1 | 11/15 | 112678 | 9.40 |
| | 1 | 11/29 | 1078 | 5.00:: | 1 | 11/29 | 357720 | 0.93:: | | | | | | | | |
| INTEREST (INCOME) EXPENSE | | | | P/R 0 | | A/P 14 | | A/R 0 | | G/L 0 | | OPENING BAL | | 945.25 | | |
| NET CHANGE | | 4420.32 | | 0.00 | | 4420.32 | | 0.00 | | 0.00 | | CLOSING BAL | | 5365.57 | | |
| 45200.0 | 1 | 9/25 | 92178 | 136.27:: | | | | | | | | | | | | |
| STATE | | | | P/R 0 | | A/P 1 | | A/R 0 | | G/L 0 | | OPENING BAL | | 3324.90 | | |
| NET CHANGE | | 136.27 | | 0.00 | | 136.27 | | 0.00 | | 0.00 | | CLOSING BAL | | 3461.17 | | |
| TOTAL NET CHANGE: | | | | | | | | | | | | | | | | |
| DEBIT ACCOUNTS | | | 373005.28 | | | | | | | | | | | | | |
| CREDIT ACCOUNTS | | | 269066.72 | | | | | | | | | | | | | |
| PROOF | | | 103938.56 | | | | | | | | | | | | | |

Report 3-2. G/L Posting Errors

| IMPRESSIVE PRODUCTS | | | | | | | | | | DATE 05/31/78 | | | | |
|-----------------------------------|------|-------|-------|-----------|---------|------|-------|-------|-----------|---------------|------|-------|-------|-----------|
| G/L POSTING ERRORS | | | | | | | | | | PAGE 11 | | | | |
| ACCT NO | SRCE | DATE | REF | AMOUNT | ACCT NO | SRCE | DATE | REF | AMOUNT | ACCT NO | SRCE | DATE | REF | AMOUNT |
| 2.0 | 1 | 9/ 8 | 0 | -17269.92 | 2.0 | 1 | 9/12 | 0 | 0.00 | 2.0 | 1 | 9/16 | 0 | 0.00 |
| 2.0 | 1 | 9/17 | 0 | 0.00 | 2.0 | 1 | 9/17 | 0 | 0.00 | 2.0 | 1 | 9/19 | 0 | -83749.84 |
| 2.0 | 1 | 9/20 | 0 | 0.00 | 2.0 | 1 | 9/20 | 0 | -65.00 | 2.0 | 1 | 9/20 | 0 | -6848.54 |
| 2.0 | 1 | 9/25 | 0 | -2042.04 | 2.0 | 1 | 9/26 | 0 | 0.00 | 2.0 | 1 | 9/26 | 0 | 0.00 |
| 2.0 | 1 | 9/28 | 0 | -4557.79 | 2.0 | 1 | 9/30 | 0 | 0.00 | 2.0 | 1 | 9/30 | 0 | 0.00 |
| 2.0 | 1 | 9/30 | 0 | -20.00 | 2.0 | 1 | 10/13 | 0 | -22139.85 | 2.0 | 1 | 10/18 | 0 | 0.00 |
| 2.0 | 1 | 10/18 | 0 | -8659.61 | 2.0 | 1 | 10/20 | 0 | -12202.96 | 2.0 | 1 | 10/31 | 0 | 0.00 |
| 2.0 | 1 | 10/31 | 0 | 0.00 | 2.0 | 1 | 10/31 | 0 | 0.00 | 2.0 | 1 | 10/31 | 0 | -19204.42 |
| 2.0 | 1 | 10/31 | 0 | -55196.68 | 2.0 | 1 | 10/31 | 0 | -59070.91 | 2.0 | 1 | 11/ 7 | 0 | 0.00 |
| 2.0 | 1 | 11/ 7 | 0 | -38082.51 | 2.0 | 1 | 11/13 | 0 | -1661.85 | 2.0 | 1 | 11/15 | 0 | 0.00 |
| 2.0 | 1 | 11/15 | 0 | 0.00 | 2.0 | 1 | 11/22 | 0 | 0.00 | 2.0 | 1 | 11/27 | 0 | 0.00 |
| 2.0 | 1 | 11/28 | 0 | 0.00 | 2.0 | 1 | 11/28 | 0 | -9156.88 | 2.0 | 1 | 11/29 | 0 | 0.00 |
| 2.0 | 1 | 11/29 | 0 | 0.00 | 2.0 | 1 | 11/29 | 0 | 0.00 | 2.0 | 1 | 11/29 | 0 | 0.00 |
| 2.0 | 1 | 11/29 | 0 | 0.00 | 2.0 | 1 | 11/29 | 0 | -2346.68 | 2.0 | 1 | 11/30 | 0 | 0.00 |
| 2020.0 | 1 | 9/ 8 | 0 | -3199.05 | 2020.0 | 1 | 9/12 | 0 | 8045.02 | 2020.0 | 1 | 9/16 | 0 | 0.00 |
| 2020.0 | 1 | 9/17 | 0 | 40285.30 | 2020.0 | 1 | 9/17 | 0 | -333.87 | 2020.0 | 1 | 9/19 | 0 | -1107.66 |
| 2020.0 | 1 | 9/20 | 0 | 0.00 | 2020.0 | 1 | 9/20 | 0 | 112.57 | 2020.0 | 1 | 9/20 | 0 | -15.63 |
| 2020.0 | 1 | 9/25 | 0 | 0.00 | 2020.0 | 1 | 9/26 | 0 | 12427.52 | 2020.0 | 1 | 9/26 | 0 | 18525.68 |
| 2020.0 | 1 | 9/28 | 0 | 0.00 | 2020.0 | 1 | 9/30 | 0 | 3536.41 | 2020.0 | 1 | 9/30 | 0 | 14749.97 |
| 2020.0 | 1 | 9/30 | 0 | -20.00 | 2020.0 | 1 | 10/13 | 0 | -1380.63 | 2020.0 | 1 | 10/18 | 0 | 32.00 |
| 2020.0 | 1 | 10/18 | 0 | -719.52 | 2020.0 | 1 | 10/20 | 0 | -12202.96 | 2020.0 | 1 | 10/31 | 0 | 0.00 |
| 2020.0 | 1 | 10/31 | 0 | 6614.17 | 2020.0 | 1 | 10/31 | 0 | 50939.94 | 2020.0 | 1 | 10/31 | 0 | -4.00 |
| 2020.0 | 1 | 10/31 | 0 | -1120.98 | 2020.0 | 1 | 10/31 | 0 | -19204.42 | 2020.0 | 1 | 11/ 7 | 0 | 6586.79 |
| 2020.0 | 1 | 11/ 7 | 0 | -28858.03 | 2020.0 | 1 | 11/13 | 0 | 0.00 | 2020.0 | 1 | 11/15 | 0 | 86.50 |
| 2020.0 | 1 | 11/15 | 0 | 12787.29 | 2020.0 | 1 | 11/22 | 0 | 7795.62 | 2020.0 | 1 | 11/27 | 0 | 491.92 |
| 2020.0 | 1 | 11/28 | 0 | 0.00 | 2020.0 | 1 | 11/28 | 0 | 431.38 | 2020.0 | 1 | 11/29 | 0 | 0.00 |
| 2020.0 | 1 | 11/29 | 0 | 1.00 | 2020.0 | 1 | 11/29 | 0 | 114.24 | 2020.0 | 1 | 11/29 | 0 | 1768.35 |
| 2020.0 | 1 | 11/29 | 0 | 3104.64 | 2020.0 | 1 | 11/29 | 0 | 4420.40 | 2020.0 | 1 | 11/30 | 0 | 4864.61 |
| 3037.0 | 1 | 9/19 | 52478 | 28.10 | 3073.0 | 1 | 9/16 | 8405 | -5963.35 | 3073.0 | 1 | 9/16 | 84050 | 5963.35 |
| 4420.0 | 1 | 10/31 | 71455 | 61.37 | 4521.0 | 1 | 9/26 | 7847 | 443.89 | 4521.0 | 1 | 11/29 | 7864 | 264.24 |
| 29098.0 | 1 | 11/29 | 29098 | 17.65 | 29098.0 | 1 | 11/30 | 29098 | -17.65 | 31640.0 | 1 | 10/31 | 71531 | 1982.03 |
| 43380.0 | 1 | 10/31 | 633 | 10.00 | | | | | | | | | | |
| 94 ERROR POSTINGS = \$ -209931.28 | | | | | | | | | | | | | | |



TO EXIT: Enter report type of '0', or SFK15 any time.

The display for this program appears in CRT 4-1.

CRT 4-1

[illegible]

51

SELECT REPORT PARAMETERS

1) Enter report type (0-5).

0 - EXIT. Program ends. The Menu is loaded.

1 - TRIAL. Print a trial income statement or trial balance report. You must select the report format; proceed to step 2.

2 - SPECIAL. Print a listing of all accounts which are indicated to be included at the Special field on the Account record; proceed to step 7.

3 - MONTHLY. Print a monthly income statement or balance report. You must specify the report format; proceed to step 2.

4 - QUARTERLY. Print a quarterly income statement or balance report. You must specify the report format; proceed to step 2.

5 - MOVE TOTALS. Request to perform monthly, quarterly, or yearly updates. This operation should be selected only at the end of a month, quarter, or year. At the end of each month, move monthly; at the end of each quarter, move quarterly; at the end of each year, move yearly (refer to Chapter 3 for more discussion). You must specify which move to make; proceed to step 4.

2) Enter report format (1-2).

1 - INCOME STATEMENT. Print an income statement in conjunction with the report type.

If trial or monthly type, proceed to step 7.

If quarterly type, you must specify which quarter; proceed to step 3.

2 - BALANCE. Print a balance sheet report in conjunction with report type.

If trial or monthly type, proceed to step 7.

If quarterly type, you must specify which quarter; proceed to step 3.

3) Enter quarter (0-3).

0 - CURRENT. Print quarterly report for the current quarter. Proceed to step 7.

1 - FIRST PREVIOUS QUARTER. Print quarterly report for one quarter prior to the current quarter. Proceed to step 7.

2 - SECOND PREVIOUS QUARTER. Print quarterly report for two quarters prior to the current quarter. Proceed to step 7.

3 - THIRD PREVIOUS QUARTER. Print quarterly report for three quarters prior to the current quarter. Proceed to step 7.

4) Enter move (1-3).

1 - MONTHLY. Clear the monthly figures on the Income and Expense accounts. Perform this operation only at the end of the month. Proceed to step 5.

2 - QUARTERLY. Move quarterly figures, and clear the monthly and current quarter figures on the Income and Expense accounts. Perform this operation only at the end of a quarter. Proceed to step 5.

3 - YEARLY. Move quarterly and yearly figures, and clear the monthly, current quarter, and current year figures on the Income and Expense accounts. Perform this operation only at the end of the year. Proceed to step 5.

Since it is very tedious to recover from an erroneous MOVE operation, you must verify any selected MOVE operation.

ENTRY CORRECT?

5) Verify move direction (0-1).

0 - No, do not move. New report parameters are requested; return to step 1.

1 - Yes, OK to move as indicated. You should have up-to-date reports for the end of the month/quarter/year before the move operation. A check is made on your report status; proceed to step 6.

HAVE YOU RUN ALL YOUR REPORTS?

6) Verify current reports (0-1)

0 - No, not all reports current, do not move. New report parameters are requested; return to step 1.

1 - Yes, current reports verified, move as indicated. WORKING. DO NOT INTERRUPT is displayed on the screen. Do not interrupt the program while a move operation is taking place. When the move operation is complete, new report parameters are requested; return to step 1.

ENTRY CORRECT?

7) Verify report parameters (0-1).

0 - No, do not print. New report parameters are requested; return to step 1

1 - Yes, print. Make sure your printer is turned on and ready to print. When the report is finished printing, new report parameters are requested; return to step 1

A sample Trial Income Statement is shown in Report 4-1, a Trial Balance Sheet in Report 4-2. A Special Report is shown in Report 4-3. A Monthly Income Statement is shown in Report 4-4, a Monthly Balance Sheet in Report 4-5. A Quarterly Income Statement for the current quarter is shown in Report 4-6, and a Quarterly Balance Sheet is shown for the first previous quarter in Report 4-7; Income Statements and Balance reports for varying quarters all use the same format.

Report 4-1. Trial Income Statement (Page 1 of 4)

| IMPRESSIVE PRODUCTS TRIAL INCOME STATEMENT | | | | DATE 05/31/78 PAGE 1 | |
|---|---------------------------------|--------------|---------|-------------------------|---------|
| ACCOUNT | NAME | THIS MONTH | PCT | QUARTER | PCT |
| INCOME | | | | | |
| | SALE OF GOODS | | | | |
| 31110.0 | FINISHED GOODS | \$ 198265.48 | 107.95% | \$ 394350.04 | 107.69% |
| 31190.0 | SALES RETURNS & ALLOWANCES | -14603.45 | 7.95% | -28184.66 | 7.69% |
| | TOTAL | \$ 183662.03 | 100.00% | \$ 366165.38 | 100.00% |
| 31210.0 | CONSULTING FEES | 4500.00 | 2.45% | 8910.00 | 2.43% |
| | ROYALTIES INCOME | | | | |
| 31310.0 | PATENT ROYALTIES | 0.00 | 0.00% | 0.00 | 0.00% |
| 31320.0 | CONSULTING ROYALTIES | 350.00 | 0.19% | 700.00 | 0.19% |
| | TOTAL | \$ 350.00 | 0.19% | \$ 700.00 | 0.19% |
| | OTHER INCOME | | | | |
| 31510.0 | COLLECTION OF BAD DEBTS | 2135.55 | 1.16% | 4604.25 | 1.25% |
| 31590.0 | MISCELLANEOUS INCOME | 0.00 | 0.00% | 0.00 | 0.00% |
| | TOTAL | \$ 2135.55 | 1.16% | \$ 4604.25 | 1.25% |
| | TOTAL INCOME | \$ 190647.58 | 103.80% | \$ 380379.63 | 103.88% |
| EXPENSES | | | | | |
| | COST OF INCOME | | | | |
| 41100.0 | COST OF SALE OF GOODS | 65000.00 | 35.39% | 127400.00 | 34.79% |
| 41200.0 | COST OF CONSULTING FEES | 0.00 | 0.00% | 0.00 | 0.00% |
| 41300.0 | ROYALTY PAYMENTS | 9180.00 | 4.99% | 18360.00 | 5.01% |
| 41900.0 | VARIANCE EXPENSE | 0.00 | 0.00% | 0.00 | 0.00% |
| | TOTAL | \$ 74180.00 | 40.38% | \$ 145760.00 | 39.80% |
| | DEVELOPMENT PROJECT EXPENSES | | | | |
| 42010.0 | DIRECT LABOR | 24137.00 | 13.14% | 48201.59 | 13.16% |
| 42020.0 | OVERHEAD | 6025.35 | 3.28% | 12032.64 | 3.28% |
| | OTHER DIRECT CHARGES | | | | |
| 42042.0 | DIRECT MATERIALS | 0.00 | 0.00% | 0.00 | 0.00% |
| 42044.0 | OUTSIDE SERVICES | 1000.00 | 0.54% | 2000.00 | 0.54% |
| 42046.0 | FREIGHT - IN | 0.00 | 0.00% | 14.30 | 0.00% |
| 42048.0 | TRAVEL | 120.34 | 0.06% | 240.68 | 0.06% |
| | TOTAL | \$ 1120.34 | 0.61% | \$ 2254.98 | 0.61% |
| | TOTAL DEVELOPMENT PROJ. EXPENSE | \$ 31282.69 | 17.03% | \$ 62489.21 | 17.06% |

Report 4-1. Trial Income Statement (Page 2 of 4)

| IMPRESSIVE PRODUCTS TRIAL INCOME STATEMENT | | | | DATE 05/31/78 PAGE 2 | |
|---|---------------------------------|-------------|--------|-------------------------|--------|
| ACCOUNT | NAME | THIS MONTH | PCT | QUARTER | PCT |
| DEPARTMENT EXPENSES | | | | | |
| SALARIES, WAGES, & BENEFITS | | | | | |
| 43110.0 | DIRECT LABOR | \$ 65023.55 | 35.40% | \$ 129852.03 | 35.46% |
| 43120.0 | INDIRECT LABOR | 0.00 | 0.00% | 0.00 | 0.00% |
| 43130.0 | OVERTIME PREMIUM | 346.89 | 0.18% | 692.74 | 0.18% |
| 43140.0 | HOLIDAY-VACATION-SICK LEAVE | 458.24 | 0.24% | 925.64 | 0.25% |
| 43150.0 | JURY DUTY & OTHER LEAVE | 0.00 | 0.00% | 0.00 | 0.00% |
| 43160.0 | PAYROLL TAXES | 4295.24 | 2.33% | 8577.59 | 2.34% |
| 43170.0 | BONUS | 0.00 | 0.00% | 0.00 | 0.00% |
| 43190.0 | OTHER FRINGE BENEFITS | 2594.74 | 1.41% | 5137.59 | 1.40% |
| | TOTAL | \$ 72718.66 | 39.59% | \$ 145185.59 | 39.65% |
| MATERIALS & SUPPLIES | | | | | |
| 43210.0 | COMPUTER MATERIALS AND SUPPLIES | 620.87 | 0.33% | 1216.91 | 0.33% |
| 43220.0 | RAW MATERIALS & SUPPLIES | 1135.99 | 0.61% | 2271.98 | 0.62% |
| 43230.0 | STATIONARY-MATR'LS AND SUPPLIES | 689.48 | 0.37% | 1365.11 | 0.37% |
| 43290.0 | OTHER MATERIALS AND SUPPLIES | 570.97 | 0.31% | 1113.39 | 0.30% |
| | TOTAL | \$ 3017.28 | 1.64% | \$ 5967.39 | 1.62% |
| FACILITIES & EQUIPMENT | | | | | |
| 43310.0 | RENT - OFFICE SPACE | 2300.00 | 1.25% | 4600.00 | 1.25% |
| 43320.0 | EQUIPMENT LEASES | 4365.79 | 2.37% | 8731.58 | 2.38% |
| 43330.0 | DEPRECIATION | 567.86 | 0.30% | 1078.97 | 0.29% |
| 43340.0 | EQUIPMENT MAINTENANCE | 57.99 | 0.03% | 111.94 | 0.03% |
| 43350.0 | JANITORIAL SERVICE | 500.00 | 0.27% | 1000.00 | 0.27% |
| 43360.0 | UTILITIES | 534.26 | 0.29% | 1065.85 | 0.29% |
| 43370.0 | AUTO EXPENSE | 478.18 | 0.26% | 930.08 | 0.25% |
| 43390.0 | EQUIPMENT RENTAL | 414.25 | 0.22% | 787.08 | 0.21% |
| | TOTAL | \$ 9218.33 | 5.01% | \$ 18305.50 | 4.99% |
| OUTSIDE SERVICES | | | | | |
| 43410.0 | PROFESSIONAL SERVICES - LEGAL | 2151.95 | 1.17% | 4088.71 | 1.11% |
| 43420.0 | PROF. SERVICES - CONSULTING | 400.00 | 0.21% | 820.00 | 0.22% |
| 43430.0 | EMPLOYMENT SERVICE | 2440.22 | 1.32% | 2440.22 | 0.66% |
| 43440.0 | CREDIT & COLLECTION SERVICE | 31.80 | 0.01% | 68.37 | 0.01% |
| 43490.0 | OTHER OUTSIDE SERVICES | 97.48 | 0.05% | 192.04 | 0.05% |
| | TOTAL | \$ 5121.45 | 2.78% | \$ 7609.34 | 2.07% |
| ADVERTISING | | | | | |
| 43510.0 | PERIODICALS | 4910.32 | 2.67% | 9820.64 | 2.68% |
| | TRADE SHOWS | | | | |
| 43521.0 | SHOWS - TRAVEL | 445.09 | 0.24% | 445.09 | 0.12% |
| 43529.0 | SHOWS - OTHER | 758.71 | 0.41% | 758.71 | 0.20% |
| | TOTAL | \$ 1203.80 | 0.65% | \$ 1203.80 | 0.32% |

Report 4-1. Trial Income Statement (Page 3 of 4)

| IMPRESSIVE PRODUCTS TRIAL INCOME STATEMENT | | | | DATE 05/31/78 PAGE 3 | |
|---|---------------------------------|--------------|---------|-------------------------|---------|
| ACCOUNT | NAME | THIS MONTH | PCT | QUARTER | PCT |
| 43530.0 | DIRECT MAILINGS - SAMPLES | \$ 250.66 | 0.13% | \$ 516.36 | 0.14% |
| 43540.0 | BROCHURE PRINTING AND MAILING | 164.88 | 0.08% | 331.41 | 0.09% |
| 43560.0 | OUTSIDE PREP. WORK ON ADS | 43.80 | 0.02% | 86.72 | 0.02% |
| 43590.0 | OTHER ADVERTISING | 0.00 | 0.00% | 0.00 | 0.00% |
| | TOTAL ADVERTISING | \$ 6573.46 | 3.57% | \$ 11958.93 | 3.26% |
| | ORDER & SHIPPING EXPENSES | | | | |
| 43610.0 | SHIPPING EXPENSE - OUTGOING | 668.59 | 0.36% | 1334.51 | 0.36% |
| 43620.0 | ORDER/SHIPPING FORMS PRINTING | 26.80 | 0.01% | 53.60 | 0.01% |
| 43630.0 | POSTAGE | 320.00 | 0.17% | 639.36 | 0.17% |
| | TOTAL | \$ 1015.39 | 0.55% | \$ 2027.47 | 0.55% |
| | OTHER EXPENSES | | | | |
| 43710.0 | TAXES-LICENSES-FEES | 258.47 | 0.14% | 258.47 | 0.07% |
| 43720.0 | INSURANCE | 573.52 | 0.31% | 1118.36 | 0.30% |
| 43730.0 | TRAVEL & EMPLOYEE BUSINESS EXP. | 189.27 | 0.10% | 374.75 | 0.10% |
| 43740.0 | COMMUNICATIONS | 1633.53 | 0.88% | 3260.53 | 0.89% |
| 43750.0 | DOUBTFUL ACCOUNTS | 468.00 | 0.25% | 982.80 | 0.26% |
| 43760.0 | DUES AND SUBSCRIPTIONS | 90.00 | 0.04% | 180.00 | 0.04% |
| 43770.0 | OTHER FREIGHT - IN | 219.23 | 0.11% | 434.08 | 0.11% |
| 43780.0 | ALLOW'L CUSTOMER UNDERPAYMENT | 0.00 | 0.00% | 0.00 | 0.00% |
| 43790.0 | MISCELLANEOUS | 56.24 | 0.03% | 109.67 | 0.02% |
| | TOTAL | \$ 3488.26 | 1.89% | \$ 6718.66 | 1.83% |
| 43810.0 | TRANSFER IN FROM OTHER DEPTS. | 0.00 | 0.00% | 0.00 | 0.00% |
| | CREDITS | | | | |
| 43910.0 | DIRECT LABOR TRANSFERRED OUT | -24137.00 | 13.14% | -48201.59 | 13.16% |
| 43920.0 | OVERHEAD APPLIED | -6025.36 | 3.28% | -11628.94 | 3.17% |
| 43990.0 | EST. O'HEAD (OVER)UNDER ABSORBD | 0.00 | 0.00% | 0.00 | 0.00% |
| | TOTAL | \$ -30162.36 | 16.42% | \$ -59830.53 | 16.33% |
| | TOTAL DEPARTMENT EXPENSES | \$ 70990.47 | 38.65% | \$ 137942.35 | 37.67% |
| | NON-OPERATING (INCOME)EXPENSE | | | | |
| 44100.0 | (GAIN)LOSS ON PROP./EQUIP. SALE | 0.00 | 0.00% | 0.00 | 0.00% |
| 44200.0 | INTEREST (INCOME)EXPENSE | 945.25 | 0.51% | 1985.03 | 0.54% |
| | TOTAL | \$ 945.25 | 0.51% | \$ 1985.03 | 0.54% |
| | ESTIMATED INCOME TAXES | | | | |
| 45100.0 | FEDERAL | 16624.50 | 9.05% | 33215.75 | 9.07% |
| 45200.0 | STATE | 3324.90 | 1.81% | 6643.15 | 1.81% |
| | TOTAL | \$ 19949.40 | 10.86% | \$ 39858.90 | 10.88% |
| | TOTAL EXPENSE | \$ 197347.81 | 107.45% | \$ 388035.49 | 105.97% |

Report 4-1. Trial Income Statement (Page 4 of 4)

| IMPRESSIVE PRODUCTS TRIAL INCOME STATEMENT | | | | DATE 05/31/78 PAGE 4 | |
|---|----------------------|------------|-----|-------------------------|-----|
| ACCOUNT | NAME | THIS MONTH | PCT | QUARTER | PCT |
| | SALES ACCOUNTS TOTAL | 367324.06 | | 732330.76 | |
| | DEBIT TOTAL | 242113.62 | | 480961.00 | |
| | CREDIT TOTAL | 235413.39 | | 468394.82 | |
| | RETAINED EARNINGS | -6700.23 | | -12566.18 | |

Report 4-2. Trial Balance Sheet (Page 1 of 4)

| IMPRESSIVE PRODUCTS | | | DATE 05/31/78 | |
|----------------------------|---------------------------------|------------|---------------|-----------|
| TRIAL BALANCE SHEET | | | PAGE 1 | |
| ACCOUNT | NAME | THIS MONTH | | |
| ASSETS | | | | |
| CURRENT ASSETS | | | | |
| | CASH | | | |
| 11110.0 | REVENUE BANK | \$ | 20235.25 | |
| 11150.0 | PETTY CASH | | 40.00 | |
| | REVENUE BANK | | \$ | 20275.25 |
| ACCOUNTS RECEIVABLE | | | | |
| | TRADE ACCOUNTS RECEIVABLE | | | |
| 11412.0 | FINISHED GOODS SALES RECEIVABLE | 100941.03 | | |
| 11414.0 | CONSULTING FEES RECEIVABLE | 1500.00 | | |
| 11419.0 | ALLOW FOR DOUBTFUL ACCOUNTS | -3028.23 | | |
| | TOTAL | \$ | 99412.80 | |
| 11420.0 | EMPLOYEE RECEIVABLES | | 1030.00 | |
| 11490.0 | OTHER ACCOUNTS RECEIVABLE | | 0.00 | |
| | TOTAL | | \$ | 100442.80 |
| INVENTORY - FINISHED GOODS | | | | |
| 11610.0 | FINISHED GOODS (AT MFG. COST) | | 266195.00 | |
| 11620.0 | RAW MATERIALS | | 929.13 | |
| 11630.0 | OTHER INVENTORY | | 0.00 | |
| | TOTAL | | \$ | 267124.13 |
| PREPAID EXPENSE | | | | |
| 11810.0 | PREPAID INSURANCE | | 877.24 | |
| 11820.0 | PREPAID TAXES | | 0.00 | |
| 11890.0 | OTHER PREPAID EXPENSES | | 63.50 | |
| | TOTAL | | \$ | 940.74 |
| CONSULTING | | | | |
| CONTRACTS-IN-PROCESS | | | | |
| 11910.0 | DIRECT LABOR | | 5400.00 | |
| 11920.0 | OVERHEAD | | 2700.00 | |
| | OTHER DIRECT CHARGES | | | |
| 11942.0 | DIRECT MATERIALS | 513.75 | | |
| 11944.0 | OUTSIDE SERVICE | 86.19 | | |
| 11946.0 | FREIGHT - IN | 22.07 | | |
| 11948.0 | TRAVEL | 143.33 | | |
| | TOTAL | \$ | 765.34 | |
| 11990.0 | CREDITS | | -1000.00 | |
| | TOTAL | | \$ | 7865.34 |
| | TOTAL CURRENT ASSETS | | \$ | 396648.26 |

Report 4-2. Trial Balance Sheet (Page 2 of 4)

| IMPRESSIVE PRODUCTS | | | DATE 05/31/78 | | |
|---------------------------|----------------------------|------------|---------------|------------|------|
| TRIAL BALANCE SHEET | | | PAGE 2 | | |
| ACCOUNT | NAME | THIS MONTH | | | |
| DEFERRED PRODUCTION COSTS | | | | | |
| 13010.0 | DIRECT LABOR | \$ | 300000.00 | | |
| 13020.0 | OVERHEAD | | 36000.00 | | |
| | OTHER DIRECT CHARGES | | | | |
| 13042.0 | DIRECT MATERIALS | | 6770.00 | | |
| 13044.0 | OUTSIDE SERVICES | | 25000.00 | | |
| 13046.0 | FREIGHT - IN | | 0.00 | | |
| | TOTAL | \$ | 31770.00 | | |
| 13990.0 | CREDITS | | 0.00 | | |
| | TOTAL | | \$ | 367770.00 | |
| PROPERTY & EQUIPMENT | | | | | |
| COST | | | | | |
| 15110.0 | MACHINERY & EQUIPMENT | | 350000.00 | | |
| 15120.0 | FURNITURE & FIXTURES | | 30000.00 | | |
| 15130.0 | LEASEHOLD IMPROVEMENTS | | 2000.00 | | |
| | TOTAL | | \$ | 382000.00 | |
| 15800.0 | CONSTRUCTION-IN-PROCESS | | | | 0.00 |
| ACCUMULATED DEPRECIATION | | | | | |
| 15910.0 | MACHINERY & EQUIPMENT | | -100000.00 | | |
| 15920.0 | FURNITURE AND FIXTURES | | -13333.00 | | |
| 15930.0 | LEASEHOLD IMPROVEMENTS | | -571.00 | | |
| | TOTAL | | \$ | -113904.00 | |
| | TOTAL PROPERTY & EQUIPMENT | | \$ | 268096.00 | |
| | TOTAL ASSETS | | \$ | 1032514.26 | |

Report 4-2. Trial Balance Sheet (Page 3 of 4)

| | | IMPRESSIVE PRODUCTS | | DATE 05/31/78 | |
|------------------------------------|--------------------------------|---------------------|-----------|---------------|--|
| | | TRIAL BALANCE SHEET | | PAGE 3 | |
| ACCOUNT | NAME | THIS MONTH | | | |
| | | | | | |
| LIABILITIES & STOCKHOLDERS' EQUITY | | | | | |
| CURRENT LIABILITIES | | | | | |
| 21100.0 | NOTES PAYABLE | \$ | 180000.00 | | |
| 21200.0 | CURRENT MATUR. ON L-T DEBT | | 0.00 | | |
| 21300.0 | VOUCHERS PAYABLE | | 95467.85 | | |
| 21400.0 | SALES TAX PAYABLE | | 3221.00 | | |
| INCOME TAX PAYABLE | | | | | |
| 21510.0 | FEDERAL | 0.00 | | | |
| 21520.0 | STATE | 0.00 | | | |
| | TOTAL | \$ | 0.00 | | |
| PAYROLL TAXES PAYABLE | | | | | |
| 21610.0 | FEDERAL INCOME TAX WITHHOLDING | 16250.00 | | | |
| 21620.0 | FICA | 3915.24 | | | |
| 21630.0 | FEDERAL UNEMPLOYMENT TAX | 783.13 | | | |
| 21640.0 | STATE INCOME TAX WITHHOLDING | 2659.94 | | | |
| 21650.0 | SDI | 652.35 | | | |
| 21660.0 | STATE UNEMPLOYMENT TAX | 1495.57 | | | |
| | TOTAL | \$ | 25756.23 | | |
| ACCRUED LIABILITIES | | | | | |
| 21710.0 | PAYROLL | 0.00 | | | |
| 21720.0 | VACATION | 12480.00 | | | |
| 21730.0 | PROPERTY TAXES | 1400.00 | | | |
| 21790.0 | OTHER ACCRUED LIABILITIES | 0.00 | | | |
| | TOTAL | \$ | 13880.00 | | |
| 21810.0 | UNEARNED INCOME | | 500.00 | | |
| 21820.0 | CUSTOMER OVERPAYMENTS | | 1500.00 | | |
| 21830.0 | UNIDENTIFIED CUSTOMER RECEIPTS | | 2300.00 | | |
| | TOTAL CURRENT LIABILITIES | \$ | 322625.08 | | |
| LONG TERM LIABILITIES | | | | | |
| 22100.0 | NOTES PAYABLE | | 200000.00 | | |
| 22200.0 | DEFERRED INCOME TAXES PAYABLE | | 0.00 | | |
| | TOTAL | \$ | 200000.00 | | |

Report 4-2. Trial Balance Sheet (Page 4 of 4)

| IMPRESSIVE PRODUCTS | | | DATE 05/31/78 | |
|---------------------|---------------------------------|------------|---------------|--|
| TRIAL BALANCE SHEET | | | PAGE 4 | |
| ACCOUNT | NAME | THIS MONTH | | |
| | STOCKHOLDERS' EQUITY | | | |
| 23100.0 | CAPITAL STOCK | \$ | 300000.00 | |
| 23200.0 | ADDITIONAL PAID-IN CAPITAL | | 0.00 | |
| 23900.0 | RETAINED EARNINGS | | 209889.18 | |
| | TOTAL | \$ | 509889.18 | |
| | TOTAL LIAB. & STOCKHOLDERS' EQ. | \$ | 1032514.26 | |
| | DEBIT TOTAL | | 1150446.49 | |
| | CREDIT TOTAL | | 1150446.49 | |
| | PROOF | | 0.00 | |

Report 4-3. Special Report (Page 1 of 3)

| IMPRESSIVE PRODUCTS | | | DATE 05/31/78 |
|---------------------|---------------------------------|------------|---------------|
| SPECIAL REPORT | | | PAGE 1 |
| ACCOUNT | NAME | THIS MONTH | |
| 11110.0 | REVENUE BANK | 20235.25 | |
| 11150.0 | PETTY CASH | 40.00 | |
| 11412.0 | FINISHED GOODS SALES RECEIVABLE | 100941.03 | |
| 11414.0 | CONSULTING FEES RECEIVABLE | 1500.00 | |
| 11419.0 | ALLOW FOR DOUBTFUL ACCOUNTS | 3028.23 | |
| 11420.0 | EMPLOYEE RECEIVABLES | 1030.00 | |
| 11490.0 | OTHER ACCOUNTS RECEIVABLE | 0.00 | |
| 11610.0 | FINISHED GOODS (AT MFG. COST) | 266195.00 | |
| 11620.0 | RAW MATERIALS | 929.13 | |
| 11630.0 | OTHER INVENTORY | 0.00 | |
| 11810.0 | PREPAID INSURANCE | 877.24 | |
| 11820.0 | PREPAID TAXES | 0.00 | |
| 11890.0 | OTHER PREPAID EXPENSES | 63.50 | |
| 11910.0 | DIRECT LABOR | 5400.00 | |
| 11920.0 | OVERHEAD | 2700.00 | |
| 11942.0 | DIRECT MATERIALS | 513.75 | |
| 11944.0 | OUTSIDE SERVICE | 86.19 | |
| 11946.0 | FREIGHT - IN | 22.07 | |
| 11948.0 | TRAVEL | 143.33 | |
| 11990.0 | CREDITS | 1000.00 | |
| 13010.0 | DIRECT LABOR | 300000.00 | |
| 13020.0 | OVERHEAD | 36000.00 | |
| 13042.0 | DIRECT MATERIALS | 6770.00 | |
| 13044.0 | OUTSIDE SERVICES | 25000.00 | |
| 13046.0 | FREIGHT - IN | 0.00 | |
| 13990.0 | CREDITS | 0.00 | |
| 1S110.0 | MACHINERY & EQUIPMENT | 350000.00 | |
| 1S120.0 | FURNITURE & FIXTURES | 30000.00 | |
| 1S130.0 | LEASEHOLD IMPROVEMENTS | 2000.00 | |
| 1S800.0 | CONSTRUCTION-IN-PROCESS | 0.00 | |
| 1S910.0 | MACHINERY & EQUIPMENT | 100000.00 | |
| 1S920.0 | FURNITURE AND FIXTURES | 13333.00 | |
| 1S930.0 | LEASEHOLD IMPROVEMENTS | 571.00 | |
| 21100.0 | NOTES PAYABLE | 180000.00 | |
| 21200.0 | CURRENT MATUR. ON L-T DEBT | 0.00 | |
| 21300.0 | VOUCHERS PAYABLE | 95467.85 | |
| 21400.0 | SALES TAX PAYABLE | 3221.00 | |
| 21510.0 | FEDERAL | 0.00 | |
| 21520.0 | STATE | 0.00 | |
| 21610.0 | FEDERAL INCOME TAX WITHHOLDING | 16250.00 | |
| 21620.0 | FICA | 3915.24 | |
| 21630.0 | FEDERAL UNEMPLOYMENT TAX | 783.13 | |
| 21640.0 | STATE INCOME TAX WITHHOLDING | 2659.94 | |
| 21650.0 | SDI | 652.35 | |
| 21660.0 | STATE UNEMPLOYMENT TAX | 1495.57 | |
| 21710.0 | PAYROLL | 0.00 | |
| 21720.0 | VACATION | 12480.00 | |

Report 4-3. Special Report (Page 2 of 3)

| | | IMPRESSIVE PRODUCTS SPECIAL REPORT | DATE 05/31/78 PAGE 2 |
|---------|---------------------------------|---------------------------------------|-------------------------|
| ACCOUNT | NAME | THIS MONTH | |
| 21730.0 | PROPERTY TAXES | 1400.00 | |
| 21790.0 | OTHER ACCRUED LIABILITIES | 0.00 | |
| 21810.0 | UNEARNED INCOME | 500.00 | |
| 21820.0 | CUSTOMER OVERPAYMENTS | 1500.00 | |
| 21830.0 | UNIDENTIFIED CUSTOMER RECEIPTS | 2300.00 | |
| 22100.0 | NOTES PAYABLE | 200000.00 | |
| 22200.0 | DEFERRED INCOME TAXES PAYABLE | 0.00 | |
| 23100.0 | CAPITAL STOCK | 300000.00 | |
| 23200.0 | ADDITIONAL PAID-IN CAPITAL | 0.00 | |
| 23900.0 | RETAINED EARNINGS | 209889.18 | |
| 31110.0 | FINISHED GOODS | 198265.48 | |
| 31190.0 | SALES RETURNS & ALLOWANCES | 14603.45 | |
| 31210.0 | CONSULTING FEES | 4500.00 | |
| 31310.0 | PATENT ROYALTIES | 0.00 | |
| 31320.0 | CONSULTING ROYALTIES | 350.00 | |
| 31510.0 | COLLECTION OF BAD DEBTS | 2135.55 | |
| 31590.0 | MISCELLANEOUS INCOME | 0.00 | |
| 41100.0 | COST OF SALE OF GOODS | 65000.00 | |
| 41200.0 | COST OF CONSULTING FEES | 0.00 | |
| 41300.0 | ROYALTY PAYMENTS | 9180.00 | |
| 41900.0 | VARIANCE EXPENSE | 0.00 | |
| 42010.0 | DIRECT LABOR | 24137.00 | |
| 42020.0 | OVERHEAD | 6025.35 | |
| 42042.0 | DIRECT MATERIALS | 0.00 | |
| 42044.0 | OUTSIDE SERVICES | 1000.00 | |
| 42046.0 | FREIGHT - IN | 0.00 | |
| 42048.0 | TRAVEL | 120.34 | |
| 43110.0 | DIRECT LABOR | 65023.55 | |
| 43120.0 | INDIRECT LABOR | 0.00 | |
| 43130.0 | OVERTIME PREMIUM | 346.89 | |
| 43140.0 | HOLIDAY-VACATION-SICK LEAVE | 458.24 | |
| 43150.0 | JURY DUTY & OTHER LEAVE | 0.00 | |
| 43160.0 | PAYROLL TAXES | 4295.24 | |
| 43170.0 | BONUS | 0.00 | |
| 43190.0 | OTHER FRINGE BENEFITS | 2594.74 | |
| 43210.0 | COMPUTER MATERIALS AND SUPPLIES | 620.87 | |
| 43220.0 | RAW MATERIALS & SUPPLIES | 1135.99 | |
| 43230.0 | STATIONARY-MATR'LS AND SUPPLIES | 689.45 | |
| 43290.0 | OTHER MATERIALS AND SUPPLIES | 570.97 | |
| 43310.0 | RENT - OFFICE SPACE | 2300.00 | |
| 43320.0 | EQUIPMENT LEASES | 4365.79 | |
| 43330.0 | DEPRECIATION | 567.86 | |
| 43340.0 | EQUIPMENT MAINTENANCE | 57.99 | |
| 43350.0 | JANITORIAL SERVICE | 500.00 | |
| 43360.0 | UTILITIES | 534.26 | |
| 43370.0 | AUTO EXPENSE | 478.18 | |
| 43390.0 | EQUIPMENT RENTAL | 414.25 | |

Report 4-3. Special Report (Page 3 of 3)

| IMPRESSIVE PRODUCTS SPECIAL REPORT | | | DATE 05/31/78 PAGE 3 |
|---------------------------------------|---------------------------------|------------|-------------------------|
| ACCOUNT | NAME | THIS MONTH | |
| 43410.0 | PROFESSIONAL SERVICES - LEGAL | 2151.95 | |
| 43420.0 | PROF. SERVICES - CONSULTING | 400.00 | |
| 43430.0 | EMPLOYMENT SERVICE | 2440.22 | |
| 43440.0 | CREDIT & COLLECTION SERVICE | 31.80 | |
| 43490.0 | OTHER OUTSIDE SERVICES | 97.48 | |
| 43510.0 | PERIODICALS | 4910.32 | |
| 43521.0 | SHOWS - TRAVEL | 445.09 | |
| 43529.0 | SHOWS - OTHER | 758.71 | |
| 43530.0 | DIRECT MAILINGS - SAMPLES | 250.66 | |
| 43540.0 | BROCHURE PRINTING AND MAILING | 164.88 | |
| 43560.0 | OUTSIDE PREP. WORK ON ADS | 43.80 | |
| 43590.0 | OTHER ADVERTISING | 0.00 | |
| 43610.0 | SHIPPING EXPENSE - OUTGOING | 668.59 | |
| 43620.0 | ORDER/SHIPPING FORMS PRINTING | 26.80 | |
| 43630.0 | POSTAGE | 320.00 | |
| 43710.0 | TAXES-LICENSES-FEES | 258.47 | |
| 43720.0 | INSURANCE | 573.52 | |
| 43730.0 | TRAVEL & EMPLOYEE BUSINESS EXP. | 189.27 | |
| 43740.0 | COMMUNICATIONS | 1633.53 | |
| 43750.0 | DOUBTFUL ACCOUNTS | 468.00 | |
| 43760.0 | DUES AND SUBSCRIPTIONS | 90.00 | |
| 43770.0 | OTHER FREIGHT - IN | 219.23 | |
| 43780.0 | ALLOW'L CUSTOMER UNDERPAYMENT | 0.00 | |
| 43790.0 | MISCELLANEOUS | 56.24 | |
| 43810.0 | TRANSFER IN FROM OTHER DEPTS. | 0.00 | |
| 43910.0 | DIRECT LABOR TRANSFERRED OUT | 24137.00 | |
| 43920.0 | OVERHEAD APPLIED | 6025.36 | |
| 43990.0 | EST. O'HEAD (OVER)UNDER ABSORBD | 0.00 | |
| 44100.0 | (GAIN)LOSS ON PROP./EQUIP. SALE | 0.00 | |
| 44200.0 | INTEREST (INCOME)EXPENSE | 945.25 | |
| 45100.0 | FEDERAL | 16624.50 | |
| 45200.0 | STATE | 3324.90 | |

Report 4-4. Monthly Income Statement (Page 1 of 4)

| IMPRESSIVE PRODUCTS MONTHLY INCOME STATEMENT | | | | DATE 05/31/78 PAGE 1 | |
|---|---------------------------------|--------------|---------|-------------------------|---------|
| ACCOUNT | NAME | THIS MONTH | PCT | YTD BAL | PCT |
| INCOME | | | | | |
| | SALE OF GOODS | | | | |
| 31110.0 | FINISHED GOODS | \$ 198265.48 | 107.95% | \$ 979368.32 | 107.40% |
| 31190.0 | SALES RETURNS & ALLOWANCES | -14603.45 | 7.95% | -67502.26 | 7.40% |
| | TOTAL | \$ 183662.03 | 100.00% | \$ 911866.06 | 100.00% |
| 31210.0 | CONSULTING FEES | 4500.00 | 2.45% | 22007.70 | 2.41% |
| | ROYALTIES INCOME | | | | |
| 31310.0 | PATENT ROYALTIES | 0.00 | 0.00% | 0.00 | 0.00% |
| 31320.0 | CONSULTING ROYALTIES | 350.00 | 0.19% | 1750.00 | 0.19% |
| | TOTAL | \$ 350.00 | 0.19% | \$ 1750.00 | 0.19% |
| | OTHER INCOME | | | | |
| 31510.0 | COLLECTION OF BAD DEBTS | 2135.55 | 1.16% | 12588.02 | 1.38% |
| 31590.0 | MISCELLANEOUS INCOME | 0.00 | 0.00% | 0.00 | 0.00% |
| | TOTAL | \$ 2135.55 | 1.16% | \$ 12588.02 | 1.38% |
| | TOTAL INCOME | \$ 190647.58 | 103.80% | \$ 948211.78 | 103.98% |
| EXPENSES | | | | | |
| | COST OF INCOME | | | | |
| 41100.0 | COST OF SALE OF GOODS | 65000.00 | 35.39% | 310856.00 | 34.09% |
| 41200.0 | COST OF CONSULTING FEES | 0.00 | 0.00% | 0.00 | 0.00% |
| 41300.0 | ROYALTY PAYMENTS | 9180.00 | 4.99% | 45900.00 | 5.03% |
| 41900.0 | VARIANCE EXPENSE | 0.00 | 0.00% | 0.00 | 0.00% |
| | TOTAL | \$ 74180.00 | 40.38% | \$ 356756.00 | 39.12% |
| | DEVELOPMENT PROJECT EXPENSES | | | | |
| 42010.0 | DIRECT LABOR | 24137.00 | 13.14% | 120287.07 | 13.19% |
| 42020.0 | OVERHEAD | 6025.35 | 3.28% | 30027.45 | 3.29% |
| | OTHER DIRECT CHARGES | | | | |
| 42042.0 | DIRECT MATERIALS | 0.00 | 0.00% | 0.00 | 0.00% |
| 42044.0 | OUTSIDE SERVICES | 1000.00 | 0.54% | 5000.00 | 0.54% |
| 42046.0 | FREIGHT - IN | 0.00 | 0.00% | 14.30 | 0.00% |
| 42048.0 | TRAVEL | 120.34 | 0.06% | 601.70 | 0.06% |
| | TOTAL | \$ 1120.34 | 0.61% | \$ 5616.00 | 0.61% |
| | TOTAL DEVELOPMENT PROJ. EXPENSE | \$ 31282.69 | 17.03% | \$ 155930.52 | 17.10% |

Report 4-4. Monthly Income Statement (Page 2 of 4)

| IMPRESSIVE PRODUCTS MONTHLY INCOME STATEMENT | | | | | DATE 05/31/78 PAGE 2 | |
|---|---------------------------------|-------------|--------|--|-------------------------|--------|
| ACCOUNT | NAME | THIS MONTH | PCT | | YTD BAL | PCT |
| DEPARTMENT EXPENSES | | | | | | |
| SALARIES, WAGES, & BENEFITS | | | | | | |
| 43110.0 | DIRECT LABOR | \$ 65023.55 | 35.40% | | \$ 324045.74 | 35.53% |
| 43120.0 | INDIRECT LABOR | 0.00 | 0.00% | | 0.00 | 0.00% |
| 43130.0 | OVERTIME PREMIUM | 346.89 | 0.18% | | 1728.73 | 0.18% |
| 43140.0 | HOLIDAY-VACATION-SICK LEAVE | 458.24 | 0.24% | | 2341.87 | 0.25% |
| 43150.0 | JURY DUTY & OTHER LEAVE | 0.00 | 0.00% | | 752.36 | 0.08% |
| 43160.0 | PAYROLL TAXES | 4295.24 | 2.33% | | 21405.38 | 2.34% |
| 43170.0 | BONUS | 0.00 | 0.00% | | 0.00 | 0.00% |
| 43190.0 | OTHER FRINGE BENEFITS | 2594.74 | 1.41% | | 12689.85 | 1.39% |
| | TOTAL | \$ 72718.66 | 39.59% | | \$ 362963.93 | 39.80% |
| MATERIALS & SUPPLIES | | | | | | |
| 43210.0 | COMPUTER MATERIALS AND SUPPLIES | 620.87 | 0.33% | | 2969.26 | 0.32% |
| 43220.0 | RAW MATERIALS & SUPPLIES | 1135.99 | 0.61% | | 5679.95 | 0.62% |
| 43230.0 | STATIONARY-MATR'LS AND SUPPLIES | 689.45 | 0.37% | | 3371.82 | 0.36% |
| 43290.0 | OTHER MATERIALS AND SUPPLIES | 570.97 | 0.31% | | 2699.97 | 0.29% |
| | TOTAL | \$ 3017.28 | 1.64% | | \$ 14721.00 | 1.61% |
| FACILITIES & EQUIPMENT | | | | | | |
| 43310.0 | RENT - OFFICE SPACE | 2300.00 | 1.25% | | 11500.00 | 1.26% |
| 43320.0 | EQUIPMENT LEASES | 4365.79 | 2.37% | | 21828.95 | 2.39% |
| 43330.0 | DEPRECIATION | 567.86 | 0.30% | | 2535.58 | 0.27% |
| 43340.0 | EQUIPMENT MAINTENANCE | 57.99 | 0.03% | | 268.10 | 0.02% |
| 43350.0 | JANITORIAL SERVICE | 500.00 | 0.27% | | 2500.00 | 0.27% |
| 43360.0 | UTILITIES | 534.26 | 0.29% | | 2656.63 | 0.29% |
| 43370.0 | AUTO EXPENSE | 478.18 | 0.26% | | 2248.47 | 0.24% |
| 43390.0 | EQUIPMENT RENTAL | 414.25 | 0.22% | | 1849.64 | 0.20% |
| | TOTAL | \$ 9218.33 | 5.01% | | \$ 45387.37 | 4.97% |
| OUTSIDE SERVICES | | | | | | |
| 43410.0 | PROFESSIONAL SERVICES - LEGAL | 2151.95 | 1.17% | | 9608.47 | 1.05% |
| 43420.0 | PROF. SERVICES - CONSULTING | 400.00 | 0.21% | | 2111.50 | 0.23% |
| 43430.0 | EMPLOYMENT SERVICE | 2440.22 | 1.32% | | 2440.22 | 0.26% |
| 43440.0 | CREDIT & COLLECTION SERVICE | 31.80 | 0.01% | | 186.31 | 0.02% |
| 43490.0 | OTHER OUTSIDE SERVICES | 97.48 | 0.05% | | 471.46 | 0.05% |
| | TOTAL | \$ 5121.45 | 2.78% | | \$ 14817.96 | 1.62% |
| ADVERTISING | | | | | | |
| 43510.0 | PERIODICALS | 4910.32 | 2.67% | | 24551.60 | 2.69% |
| | TRADE SHOWS | | | | | |
| 43521.0 | SHOWS - TRAVEL | 445.09 | 0.24% | | 445.09 | 0.04% |
| 43529.0 | SHOWS - OTHER | 758.71 | 0.41% | | 758.71 | 0.08% |
| | TOTAL | \$ 1203.80 | 0.65% | | \$ 1203.80 | 0.13% |

Report 4-4. Monthly Income Statement (Page 3 of 4)

| IMPRESSIVE PRODUCTS MONTHLY INCOME STATEMENT | | | | DATE 05/31/78 PAGE 3 | |
|---|---------------------------------|--------------|---------|-------------------------|---------|
| ACCOUNT | NAME | THIS MONTH | PCT | YTD BAL | PCT |
| 43530.0 | DIRECT MAILINGS - SAMPLES | \$ 250.66 | 0.13% | \$ 1337.37 | 0.14% |
| 43540.0 | BROCHURE PRINTING AND MAILING | 164.88 | 0.08% | 833.50 | 0.09% |
| 43560.0 | OUTSIDE PREP. WORK ON ADS | 43.80 | 0.02% | 214.20 | 0.02% |
| 43590.0 | OTHER ADVERTISING | 0.00 | 0.00% | 0.00 | 0.00% |
| | TOTAL ADVERTISING | \$ 6573.46 | 3.57% | \$ 28140.47 | 3.08% |
| | ORDER & SHIPPING EXPENSES | | | | |
| 43610.0 | SHIPPING EXPENSE - OUTGOING | 668.59 | 0.36% | 3328.27 | 0.36% |
| 43620.0 | ORDER/SHIPPING FORMS PRINTING | 26.80 | 0.01% | 134.00 | 0.01% |
| 43630.0 | POSTAGE | 320.00 | 0.17% | 1596.48 | 0.17% |
| | TOTAL | \$ 1015.39 | 0.55% | \$ 5058.75 | 0.55% |
| | OTHER EXPENSES | | | | |
| 43710.0 | TAXES-LICENSES-FEES | 258.47 | 0.14% | 258.47 | 0.02% |
| 43720.0 | INSURANCE | 573.52 | 0.31% | 2712.02 | 0.29% |
| 43730.0 | TRAVEL & EMPLOYEE BUSINESS EXP. | 189.27 | 0.10% | 925.63 | 0.10% |
| 43740.0 | COMMUNICATIONS | 1633.53 | 0.88% | 8131.76 | 0.89% |
| 43750.0 | DOUBTFUL ACCOUNTS | 468.00 | 0.25% | 2604.42 | 0.28% |
| 43760.0 | DUES AND SUBSCRIPTIONS | 90.00 | 0.04% | 450.00 | 0.04% |
| 43770.0 | OTHER FREIGHT - IN | 219.23 | 0.11% | 1072.18 | 0.11% |
| 43780.0 | ALLOW'L CUSTOMER UNDERPAYMENT | 0.00 | 0.00% | 0.00 | 0.00% |
| 43790.0 | MISCELLANEOUS | 56.24 | 0.03% | 265.95 | 0.02% |
| | TOTAL | \$ 3488.26 | 1.89% | \$ 16420.43 | 1.80% |
| 43810.0 | TRANSFER IN FROM OTHER DEPTS. | 0.00 | 0.00% | 0.00 | 0.00% |
| | CREDITS | | | | |
| 43910.0 | DIRECT LABOR TRANSFERRED OUT | -24137.00 | 13.14% | -120287.07 | 13.19% |
| 43920.0 | OVERHEAD APPLIED | -6025.36 | 3.28% | -27851.31 | 3.05% |
| 43990.0 | EST. O'HEAD (OVER)UNDER ABSORBD | 0.00 | 0.00% | 0.00 | 0.00% |
| | TOTAL | \$ -30162.36 | 16.42% | \$ -148138.38 | 16.24% |
| | TOTAL DEPARTMENT EXPENSES | \$ 70990.47 | 38.65% | \$ 339371.53 | 37.21% |
| | NON-OPERATING (INCOME)EXPENSE | | | | |
| 44100.0 | (GAIN)LOSS ON PROP./EQUIP. SALE | 0.00 | 0.00% | 0.00 | 0.00% |
| 44200.0 | INTEREST (INCOME)EXPENSE | 945.25 | 0.51% | 5260.33 | 0.57% |
| | TOTAL | \$ 945.25 | 0.51% | \$ 5260.33 | 0.57% |
| | ESTIMATED INCOME TAXES | | | | |
| 45100.0 | FEDERAL | 16624.50 | 9.05% | 82939.73 | 9.09% |
| 45200.0 | STATE | 3324.90 | 1.81% | 16587.95 | 1.81% |
| | TOTAL | \$ 19949.40 | 10.86% | \$ 99527.68 | 10.91% |
| | TOTAL EXPENSE | \$ 197347.81 | 107.45% | \$ 956846.06 | 104.93% |

Report 4-4. Monthly Income Statement (Page 4 of 4)

| IMPRESSIVE PRODUCTS MONTHLY INCOME STATEMENT | | | | DATE 05/31/78 PAGE 4 | |
|---|-------------------|------------|-----|-------------------------|-----|
| ACCOUNT | NAME | THIS MONTH | PCT | YTD BAL | PCT |
| | DEBIT TOTAL | 242113.62 | | 1177397.02 | |
| | CREDIT TOTAL | 235413.39 | | 1163852.42 | |
| | RETAINED EARNINGS | -6700.23 | | -13544.60 | |

Report 4-5. Monthly Balance Sheet (Page 1 of 4)

| IMPRESSIVE PRODUCTS | | | DATE 05/31/78 | |
|----------------------------|---------------------------------|------------|---------------|-----------|
| MONTHLY BALANCE SHEET | | | PAGE 1 | |
| ACCOUNT | NAME | THIS MONTH | | |
| ASSETS | | | | |
| CURRENT ASSETS | | | | |
| | CASH | | | |
| 11110.0 | REVENUE BANK | \$ | 20235.25 | |
| 11150.0 | PETTY CASH | | 40.00 | |
| | REVENUE BANK | | \$ | 20275.25 |
| ACCOUNTS RECEIVABLE | | | | |
| | TRADE ACCOUNTS RECEIVABLE | | | |
| 11412.0 | FINISHED GOODS SALES RECEIVABLE | 100941.03 | | |
| 11414.0 | CONSULTING FEES RECEIVABLE | 1500.00 | | |
| 11419.0 | ALLOW FOR DOUBTFUL ACCOUNTS | -3028.23 | | |
| | TOTAL | \$ | 99412.80 | |
| 11420.0 | EMPLOYEE RECEIVABLES | | 1030.00 | |
| 11490.0 | OTHER ACCOUNTS RECEIVABLE | | 0.00 | |
| | TOTAL | | \$ | 100442.80 |
| INVENTORY - FINISHED GOODS | | | | |
| 11610.0 | FINISHED GOODS (AT MFG. COST) | | 266195.00 | |
| 11620.0 | RAW MATERIALS | | 929.13 | |
| 11630.0 | OTHER INVENTORY | | 0.00 | |
| | TOTAL | | \$ | 267124.13 |
| PREPAID EXPENSE | | | | |
| 11810.0 | PREPAID INSURANCE | | 877.24 | |
| 11820.0 | PREPAID TAXES | | 0.00 | |
| 11890.0 | OTHER PREPAID EXPENSES | | 63.50 | |
| | TOTAL | | \$ | 940.74 |
| CONSULTING | | | | |
| CONTRACTS-IN-PROCESS | | | | |
| 11910.0 | DIRECT LABOR | | 5400.00 | |
| 11920.0 | OVERHEAD | | 2700.00 | |
| | OTHER DIRECT CHARGES | | | |
| 11942.0 | DIRECT MATERIALS | 513.75 | | |
| 11944.0 | OUTSIDE SERVICE | 86.19 | | |
| 11946.0 | FREIGHT - IN | 22.07 | | |
| 11948.0 | TRAVEL | 143.33 | | |
| | TOTAL | \$ | 765.34 | |
| 11990.0 | CREDITS | | -1000.00 | |
| | TOTAL | | \$ | 7865.34 |
| TOTAL CURRENT ASSETS | | | \$ | 396648.26 |

Report 4-5. Monthly Balance Sheet (Page 2 of 4)

| IMPRESSIVE PRODUCTS | | | DATE 05/31/78 | |
|---------------------------|----------------------------|------------|---------------|------------|
| MONTHLY BALANCE SHEET | | | PAGE 2 | |
| ACCOUNT | NAME | THIS MONTH | | |
| DEFERRED PRODUCTION COSTS | | | | |
| 13010.0 | DIRECT LABOR | \$ | 300000.00 | |
| 13020.0 | OVERHEAD | | 36000.00 | |
| | OTHER DIRECT CHARGES | | | |
| 13042.0 | DIRECT MATERIALS | | 6770.00 | |
| 13044.0 | OUTSIDE SERVICES | | 25000.00 | |
| 13046.0 | FREIGHT - IN | | 0.00 | |
| | TOTAL | \$ | 31770.00 | |
| 13990.0 | CREDITS | | 0.00 | |
| | TOTAL | | \$ | 367770.00 |
| PROPERTY & EQUIPMENT | | | | |
| COST | | | | |
| 15110.0 | MACHINERY & EQUIPMENT | | 350000.00 | |
| 15120.0 | FURNITURE & FIXTURES | | 30000.00 | |
| 15130.0 | LEASEHOLD IMPROVEMENTS | | 2000.00 | |
| | TOTAL | | \$ | 382000.00 |
| 15800.0 | CONSTRUCTION-IN-PROCESS | | | 0.00 |
| ACCUMULATED DEPRECIATION | | | | |
| 15910.0 | MACHINERY & EQUIPMENT | | -100000.00 | |
| 15920.0 | FURNITURE AND FIXTURES | | -13333.00 | |
| 15930.0 | LEASEHOLD IMPROVEMENTS | | -571.00 | |
| | TOTAL | | \$ | -113904.00 |
| | TOTAL PROPERTY & EQUIPMENT | | \$ | 268096.00 |
| | TOTAL ASSETS | | \$ | 1032514.26 |

Report 4-5. Monthly Balance Sheet (Page 3 of 4)

| IMPRESSIVE PRODUCTS | | DATE 05/31/78 | |
|------------------------------------|--------------------------------|---------------|-----------|
| MONTHLY BALANCE SHEET | | PAGE 3 | |
| ACCOUNT | NAME | THIS MONTH | |
| LIABILITIES & STOCKHOLDERS' EQUITY | | | |
| CURRENT LIABILITIES | | | |
| 21100.0 | NOTES PAYABLE | \$ | 180000.00 |
| 21200.0 | CURRENT MATUR. ON L-T DEBT | | 0.00 |
| 21300.0 | VOUCHERS PAYABLE | | 95467.85 |
| 21400.0 | SALES TAX PAYABLE | | 3221.00 |
| INCOME TAX PAYABLE | | | |
| 21510.0 | FEDERAL | 0.00 | |
| 21520.0 | STATE | 0.00 | |
| | TOTAL | \$ | 0.00 |
| PAYROLL TAXES PAYABLE | | | |
| 21610.0 | FEDERAL INCOME TAX WITHHOLDING | 16250.00 | |
| 21620.0 | FICA | 3915.24 | |
| 21630.0 | FEDERAL UNEMPLOYMENT TAX | 783.13 | |
| 21640.0 | STATE INCOME TAX WITHHOLDING | 2659.94 | |
| 21650.0 | SDI | 652.35 | |
| 21660.0 | STATE UNEMPLOYMENT TAX | 1495.57 | |
| | TOTAL | \$ | 25756.23 |
| ACCRUED LIABILITIES | | | |
| 21710.0 | PAYROLL | 0.00 | |
| 21720.0 | VACATION | 12480.00 | |
| 21730.0 | PROPERTY TAXES | 1400.00 | |
| 21790.0 | OTHER ACCRUED LIABILITIES | 0.00 | |
| | TOTAL | \$ | 13880.00 |
| 21810.0 | UNEARNED INCOME | | 500.00 |
| 21820.0 | CUSTOMER OVERPAYMENTS | | 1500.00 |
| 21830.0 | UNIDENTIFIED CUSTOMER RECEIPTS | | 2300.00 |
| | TOTAL CURRENT LIABILITIES | \$ | 322625.08 |
| LONG TERM LIABILITIES | | | |
| 22100.0 | NOTES PAYABLE | | 200000.00 |
| 22200.0 | DEFERRED INCOME TAXES PAYABLE | | 0.00 |
| | TOTAL | \$ | 200000.00 |

Report 4-5. Monthly Balance Sheet (Page 4 of 4)

| IMPRESSIVE PRODUCTS | | DATE 05/31/78 | |
|-----------------------|---------------------------------|---------------|------------|
| MONTHLY BALANCE SHEET | | PAGE 4 | |
| ACCOUNT | NAME | THIS MONTH | |
| | STOCKHOLDERS' EQUITY | | |
| 23100.0 | CAPITAL STOCK | \$ | 300000.00 |
| 23200.0 | ADDITIONAL PAID-IN CAPITAL | | 0.00 |
| 23900.0 | RETAINED EARNINGS | | 209889.18 |
| | TOTAL | \$ | 509889.18 |
| | TOTAL LIAB. & STOCKHOLDERS' EQ. | \$ | 1032514.26 |
| | DEBIT TOTAL | | 1150446.49 |
| | CREDIT TOTAL | | 1150446.49 |
| | PROOF | | 0.00 |

Report 4-6. Quarterly Income Statement (Page 1 of 4)

| IMPRESSIVE PRODUCTS QUARTERLY INCOME STATEMENT | | | | DATE 05/31/78 PAGE 1 | |
|---|---------------------------------|--------------|---------|-------------------------|---------|
| ACCOUNT | NAME | QUARTER | PCT | YTD BAL | PCT |
| INCOME | | | | | |
| | SALE OF GOODS | | | | |
| 31110.0 | FINISHED GOODS | \$ 394350.04 | 107.69% | \$ 979368.32 | 107.40% |
| 31190.0 | SALES RETURNS & ALLOWANCES | -28184.66 | 7.69% | -67502.26 | 7.40% |
| | TOTAL | \$ 366165.38 | 100.00% | \$ 911866.06 | 100.00% |
| 31210.0 | CONSULTING FEES | 8910.00 | 2.43% | 22007.70 | 2.41% |
| | ROYALTIES INCOME | | | | |
| 31310.0 | PATENT ROYALTIES | 0.00 | 0.00% | 0.00 | 0.00% |
| 31320.0 | CONSULTING ROYALTIES | 700.00 | 0.19% | 1750.00 | 0.19% |
| | TOTAL | \$ 700.00 | 0.19% | \$ 1750.00 | 0.19% |
| | OTHER INCOME | | | | |
| 31510.0 | COLLECTION OF BAD DEBTS | 4604.25 | 1.25% | 12588.02 | 1.38% |
| 31590.0 | MISCELLANEOUS INCOME | 0.00 | 0.00% | 0.00 | 0.00% |
| | TOTAL | \$ 4604.25 | 1.25% | \$ 12588.02 | 1.38% |
| | TOTAL INCOME | \$ 380379.63 | 103.88% | \$ 948211.78 | 103.98% |
| EXPENSES | | | | | |
| | COST OF INCOME | | | | |
| 41100.0 | COST OF SALE OF GOODS | 127400.00 | 34.79% | 310856.00 | 34.09% |
| 41200.0 | COST OF CONSULTING FEES | 0.00 | 0.00% | 0.00 | 0.00% |
| 41300.0 | ROYALTY PAYMENTS | 18360.00 | 5.01% | 45900.00 | 5.03% |
| 41900.0 | VARIANCE EXPENSE | 0.00 | 0.00% | 0.00 | 0.00% |
| | TOTAL | \$ 145760.00 | 39.80% | \$ 356756.00 | 39.12% |
| | DEVELOPMENT PROJECT EXPENSES | | | | |
| 42010.0 | DIRECT LABOR | 48201.59 | 13.16% | 120287.07 | 13.19% |
| 42020.0 | OVERHEAD | 12032.64 | 3.28% | 30027.45 | 3.29% |
| | OTHER DIRECT CHARGES | | | | |
| 42042.0 | DIRECT MATERIALS | 0.00 | 0.00% | 0.00 | 0.00% |
| 42044.0 | OUTSIDE SERVICES | 2000.00 | 0.54% | 5000.00 | 0.54% |
| 42046.0 | FREIGHT - IN | 14.30 | 0.00% | 14.30 | 0.00% |
| 42048.0 | TRAVEL | 240.68 | 0.06% | 601.70 | 0.06% |
| | TOTAL | \$ 2254.98 | 0.61% | \$ 5616.00 | 0.61% |
| | TOTAL DEVELOPMENT PROJ. EXPENSE | \$ 62489.21 | 17.06% | \$ 155930.52 | 17.10% |

Report 4-6. Quarterly Income Statement (Page 2 of 4)

| IMPRESSIVE PRODUCTS QUARTERLY INCOME STATEMENT | | | | | DATE 05/31/78 PAGE 2 | |
|---|---------------------------------|--------------|--------|--|-------------------------|--------|
| ACCOUNT | NAME | QUARTER | PCT | | YTD BAL | PCT |
| DEPARTMENT EXPENSES | | | | | | |
| SALARIES, WAGES, & BENEFITS | | | | | | |
| 43110.0 | DIRECT LABOR | \$ 129852.03 | 35.46% | | \$ 324045.74 | 35.53% |
| 43120.0 | INDIRECT LABOR | 0.00 | 0.00% | | 0.00 | 0.00% |
| 43130.0 | OVERTIME PREMIUM | 692.74 | 0.18% | | 1728.73 | 0.18% |
| 43140.0 | HOLIDAY-VACATION-SICK LEAVE | 925.64 | 0.25% | | 2341.87 | 0.25% |
| 43150.0 | JURY DUTY & OTHER LEAVE | 0.00 | 0.00% | | 752.36 | 0.08% |
| 43160.0 | PAYROLL TAXES | 8577.59 | 2.34% | | 21405.38 | 2.34% |
| 43170.0 | BONUS | 0.00 | 0.00% | | 0.00 | 0.00% |
| 43190.0 | OTHER FRINGE BENEFITS | 5137.59 | 1.40% | | 12689.85 | 1.39% |
| | TOTAL | \$ 145185.59 | 39.65% | | \$ 362963.93 | 39.80% |
| MATERIALS & SUPPLIES | | | | | | |
| 43210.0 | COMPUTER MATERIALS AND SUPPLIES | 1216.91 | 0.33% | | 2969.26 | 0.32% |
| 43220.0 | RAW MATERIALS & SUPPLIES | 2271.98 | 0.62% | | 5679.95 | 0.62% |
| 43230.0 | STATIONARY-MATR'LS AND SUPPLIES | 1365.11 | 0.37% | | 3371.82 | 0.36% |
| 43290.0 | OTHER MATERIALS AND SUPPLIES | 1113.39 | 0.30% | | 2699.97 | 0.29% |
| | TOTAL | \$ 5967.39 | 1.62% | | \$ 14721.00 | 1.61% |
| FACILITIES & EQUIPMENT | | | | | | |
| 43310.0 | RENT - OFFICE SPACE | 4600.00 | 1.25% | | 11500.00 | 1.26% |
| 43320.0 | EQUIPMENT LEASES | 8731.58 | 2.38% | | 21828.95 | 2.39% |
| 43330.0 | DEPRECIATION | 1078.97 | 0.29% | | 2535.58 | 0.27% |
| 43340.0 | EQUIPMENT MAINTENANCE | 111.94 | 0.03% | | 268.10 | 0.02% |
| 43350.0 | JANITORIAL SERVICE | 1000.00 | 0.27% | | 2500.00 | 0.27% |
| 43360.0 | UTILITIES | 1065.85 | 0.29% | | 2656.63 | 0.29% |
| 43370.0 | AUTO EXPENSE | 930.08 | 0.25% | | 2248.47 | 0.24% |
| 43390.0 | EQUIPMENT RENTAL | 787.08 | 0.21% | | 1849.64 | 0.20% |
| | TOTAL | \$ 18305.50 | 4.99% | | \$ 45387.37 | 4.97% |
| OUTSIDE SERVICES | | | | | | |
| 43410.0 | PROFESSIONAL SERVICES - LEGAL | 4088.71 | 1.11% | | 9608.47 | 1.05% |
| 43420.0 | PROF. SERVICES - CONSULTING | 820.00 | 0.22% | | 2111.50 | 0.23% |
| 43430.0 | EMPLOYMENT SERVICE | 2440.22 | 0.66% | | 2440.22 | 0.26% |
| 43440.0 | CREDIT & COLLECTION SERVICE | 68.37 | 0.01% | | 186.31 | 0.02% |
| 43490.0 | OTHER OUTSIDE SERVICES | 192.04 | 0.05% | | 471.46 | 0.05% |
| | TOTAL | \$ 7609.34 | 2.07% | | \$ 14817.96 | 1.62% |
| ADVERTISING | | | | | | |
| 43510.0 | PERIODICALS | 9820.64 | 2.68% | | 24551.60 | 2.69% |
| | TRADE SHOWS | | | | | |
| 43521.0 | SHOWS - TRAVEL | 445.09 | 0.12% | | 445.09 | 0.04% |
| 43529.0 | SHOWS - OTHER | 758.71 | 0.20% | | 758.71 | 0.08% |
| | TOTAL | \$ 1203.80 | 0.32% | | \$ 1203.80 | 0.13% |

Report 4-6. Quarterly Income Statement (Page 3 of 4)

| IMPRESSIVE PRODUCTS QUARTERLY INCOME STATEMENT | | | | | DATE 05/31/78 PAGE 3 | |
|---|---------------------------------|--------------|---------|--|-------------------------|---------|
| ACCOUNT | NAME | QUARTER | PCT | | YTD BAL | PCT |
| 43530.0 | DIRECT MAILINGS - SAMPLES | \$ 516.36 | 0.14% | | \$ 1337.37 | 0.14% |
| 43540.0 | BROCHURE PRINTING AND MAILING | 331.41 | 0.09% | | 833.50 | 0.09% |
| 43560.0 | OUTSIDE PREP. WORK ON ADS | 86.72 | 0.02% | | 214.20 | 0.02% |
| 43590.0 | OTHER ADVERTISING | 0.00 | 0.00% | | 0.00 | 0.00% |
| | TOTAL ADVERTISING | \$ 11958.93 | 3.26% | | \$ 28140.47 | 3.08% |
| | ORDER & SHIPPING EXPENSES | | | | | |
| 43610.0 | SHIPPING EXPENSE - OUTGOING | 1334.51 | 0.36% | | 3328.27 | 0.36% |
| 43620.0 | ORDER/SHIPPING FORMS PRINTING | 53.60 | 0.01% | | 134.00 | 0.01% |
| 43630.0 | POSTAGE | 639.36 | 0.17% | | 1596.48 | 0.17% |
| | TOTAL | \$ 2027.47 | 0.55% | | \$ 5058.75 | 0.55% |
| | OTHER EXPENSES | | | | | |
| 43710.0 | TAXES-LICENSES-FEES | 258.47 | 0.07% | | 258.47 | 0.02% |
| 43720.0 | INSURANCE | 1118.36 | 0.30% | | 2712.02 | 0.29% |
| 43730.0 | TRAVEL & EMPLOYEE BUSINESS EXP. | 374.75 | 0.10% | | 925.63 | 0.10% |
| 43740.0 | COMMUNICATIONS | 3260.53 | 0.89% | | 8131.76 | 0.89% |
| 43750.0 | DOUBTFUL ACCOUNTS | 982.80 | 0.26% | | 2604.42 | 0.28% |
| 43760.0 | DUES AND SUBSCRIPTIONS | 180.00 | 0.04% | | 450.00 | 0.04% |
| 43770.0 | OTHER FREIGHT - IN | 434.08 | 0.11% | | 1072.18 | 0.11% |
| 43780.0 | ALLOW'L CUSTOMER UNDERPAYMENT | 0.00 | 0.00% | | 0.00 | 0.00% |
| 43790.0 | MISCELLANEOUS | 109.67 | 0.02% | | 265.95 | 0.02% |
| | TOTAL | \$ 6718.66 | 1.83% | | \$ 16420.43 | 1.80% |
| 43810.0 | TRANSFER IN FROM OTHER DEPTS. | 0.00 | 0.00% | | 0.00 | 0.00% |
| | CREDITS | | | | | |
| 43910.0 | DIRECT LABOR TRANSFERRED OUT | -48201.59 | 13.16% | | -120287.07 | 13.19% |
| 43920.0 | OVERHEAD APPLIED | -11628.94 | 3.17% | | -27851.31 | 3.05% |
| 43990.0 | EST. O'HEAD (OVER)UNDER ABSORBD | 0.00 | 0.00% | | 0.00 | 0.00% |
| | TOTAL | \$ -59830.53 | 16.33% | | \$ -148138.38 | 16.24% |
| | TOTAL DEPARTMENT EXPENSES | \$ 137942.35 | 37.67% | | \$ 339371.53 | 37.21% |
| | NON-OPERATING (INCOME)EXPENSE | | | | | |
| 44100.0 | (GAIN)LOSS ON PROP./EQUIP. SALE | 0.00 | 0.00% | | 0.00 | 0.00% |
| 44200.0 | INTEREST (INCOME)EXPENSE | 1985.03 | 0.54% | | 5260.33 | 0.57% |
| | TOTAL | \$ 1985.03 | 0.54% | | \$ 5260.33 | 0.57% |
| | ESTIMATED INCOME TAXES | | | | | |
| 45100.0 | FEDERAL | 33215.75 | 9.07% | | 82939.73 | 9.09% |
| 45200.0 | STATE | 6643.15 | 1.81% | | 16587.95 | 1.81% |
| | TOTAL | \$ 39858.90 | 10.88% | | \$ 99527.68 | 10.91% |
| | TOTAL EXPENSE | \$ 388035.49 | 105.97% | | \$ 956846.06 | 104.93% |

Report 4-6. Quarterly Income Statement (Page 4 of 4)

| IMPRESSIVE PRODUCTS QUARTERLY INCOME STATEMENT | | | | | DATE 05/31/78 PAGE 4 | |
|---|-------------------|-----------|-----|--|-------------------------|-----|
| ACCOUNT | NAME | QUARTER | PCT | | YTD BAL | PCT |
| | DEBIT TOTAL | 480961.00 | | | 1177397.02 | |
| | CREDIT TOTAL | 468394.82 | | | 1163852.42 | |
| | RETAINED EARNINGS | -12566.18 | | | -13544.60 | |

Report 4-7. Quarterly Balance Sheet — 1st Previous Quarter (Page 1 of 4)

| IMPRESSIVE PRODUCTS | | | DATE 05/31/78 | |
|----------------------------|---------------------------------|-----------|---------------|-----------|
| QUARTERLY BALANCE SHEET | | | PAGE 1 | |
| PREVIOUS QUARTER 1 | | | | |
| ACCOUNT | NAME | | QUARTER | |
| ASSETS | | | | |
| CURRENT ASSETS | | | | |
| CASH | | | | |
| 11110.0 | REVENUE BANK | | \$ | 29455.26 |
| 11150.0 | PETTY CASH | | | 152.15 |
| | REVENUE BANK | | \$ | 29607.41 |
| ACCOUNTS RECEIVABLE | | | | |
| TRADE ACCOUNTS RECEIVABLE | | | | |
| 11412.0 | FINISHED GOODS SALES RECEIVABLE | 107331.18 | | |
| 11414.0 | CONSULTING FEES RECEIVABLE | 1500.00 | | |
| 11419.0 | ALLOW FOR DOUBTFUL ACCOUNTS | -2900.67 | | |
| | TOTAL | | \$ | 105930.51 |
| 11420.0 | EMPLOYEE RECEIVABLES | | | 1857.60 |
| 11490.0 | OTHER ACCOUNTS RECEIVABLE | | | 0.00 |
| | TOTAL | | \$ | 107788.11 |
| INVENTORY - FINISHED GOODS | | | | |
| 11610.0 | FINISHED GOODS (AT MFG. COST) | | | 383795.00 |
| 11620.0 | RAW MATERIALS | | | 1050.87 |
| 11630.0 | OTHER INVENTORY | | | 0.00 |
| | TOTAL | | \$ | 384845.87 |
| PREPAID EXPENSE | | | | |
| 11810.0 | PREPAID INSURANCE | | | 0.00 |
| 11820.0 | PREPAID TAXES | | | 3507.86 |
| 11890.0 | OTHER PREPAID EXPENSES | | | 0.00 |
| | TOTAL | | \$ | 3507.86 |
| CONSULTING | | | | |
| CONTRACTS-IN-PROCESS | | | | |
| 11910.0 | DIRECT LABOR | | | 5400.00 |
| 11920.0 | OVERHEAD | | | 2700.00 |
| | OTHER DIRECT CHARGES | | | |
| 11942.0 | DIRECT MATERIALS | 189.50 | | |
| 11944.0 | OUTSIDE SERVICE | 0.00 | | |
| 11946.0 | FREIGHT - IN | 79.12 | | |
| 11948.0 | TRAVEL | 143.33 | | |
| | TOTAL | | \$ | 411.95 |
| 11990.0 | CREDITS | | | 0.00 |
| | TOTAL | | \$ | 8511.95 |
| TOTAL CURRENT ASSETS | | | \$ | 534261.20 |

Report 4-7. Quarterly Balance Sheet — 1st Previous Quarter (Page 2 of 4)

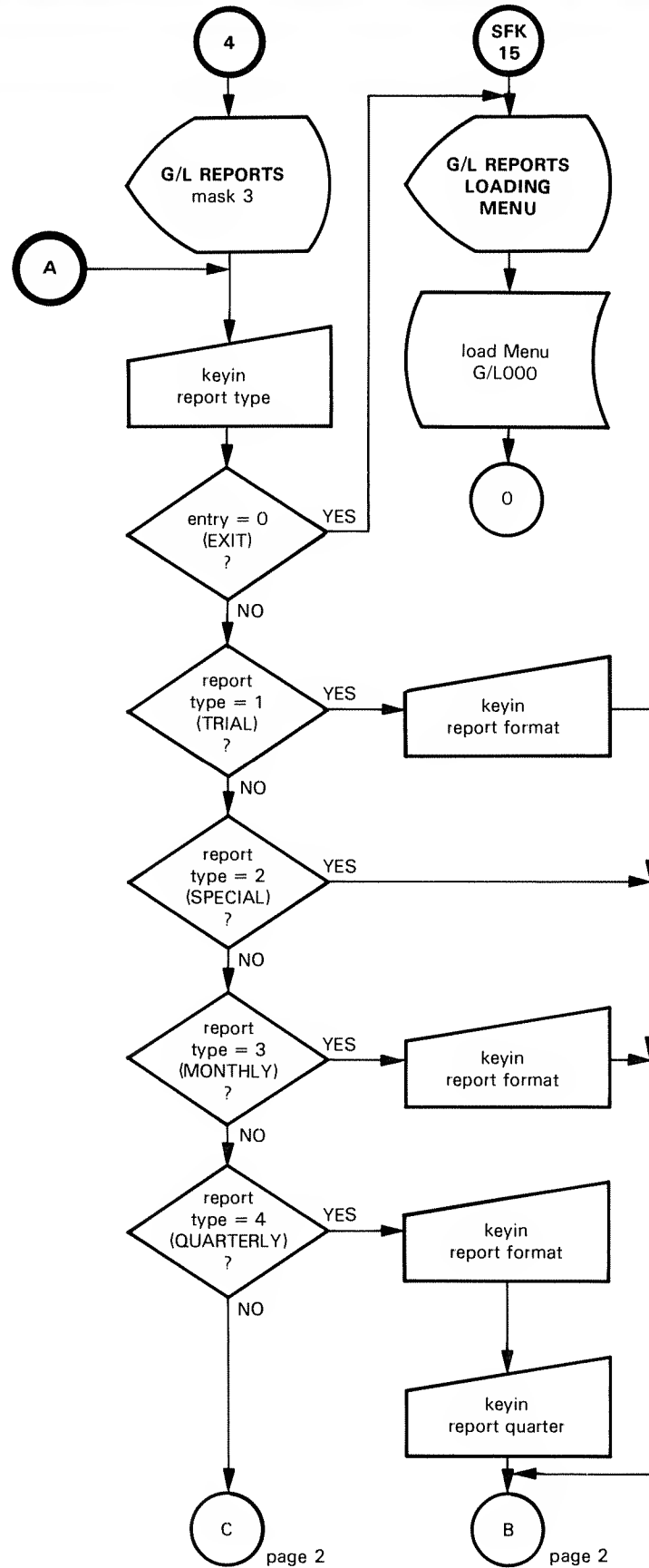
| IMPRESSIVE PRODUCTS | | | DATE 05/31/78 |
|---------------------------|----------------------------|-----------|---------------|
| QUARTERLY BALANCE SHEET | | | PAGE 2 |
| PREVIOUS QUARTER 1 | | | |
| ACCOUNT | NAME | QUARTER | |
| DEFERRED PRODUCTION COSTS | | | |
| 13010.0 | DIRECT LABOR | \$ | 295000.00 |
| 13020.0 | OVERHEAD | | 35400.00 |
| | OTHER DIRECT CHARGES | | |
| 13042.0 | DIRECT MATERIALS | 7000.00 | |
| 13044.0 | OUTSIDE SERVICES | 12500.00 | |
| 13046.0 | FREIGHT - IN | 51.25 | |
| | TOTAL | \$ | 19551.25 |
| 13990.0 | CREDITS | | -546.00 |
| | TOTAL | \$ | 349405.25 |
| PROPERTY & EQUIPMENT | | | |
| COST | | | |
| 15110.0 | MACHINERY & EQUIPMENT | 245899.55 | |
| 15120.0 | FURNITURE & FIXTURES | 30000.00 | |
| 15130.0 | LEASEHOLD IMPROVEMENTS | 0.00 | |
| | TOTAL | \$ | 275899.55 |
| 15800.0 | CONSTRUCTION-IN-PROCESS | | 0.00 |
| ACCUMULATED DEPRECIATION | | | |
| 15910.0 | MACHINERY & EQUIPMENT | -93333.00 | |
| 15920.0 | FURNITURE AND FIXTURES | -12121.00 | |
| 15930.0 | LEASEHOLD IMPROVEMENTS | 0.00 | |
| | TOTAL | \$ | -105454.00 |
| | TOTAL PROPERTY & EQUIPMENT | \$ | 170445.55 |
| | TOTAL ASSETS | \$ | 1054112.00 |

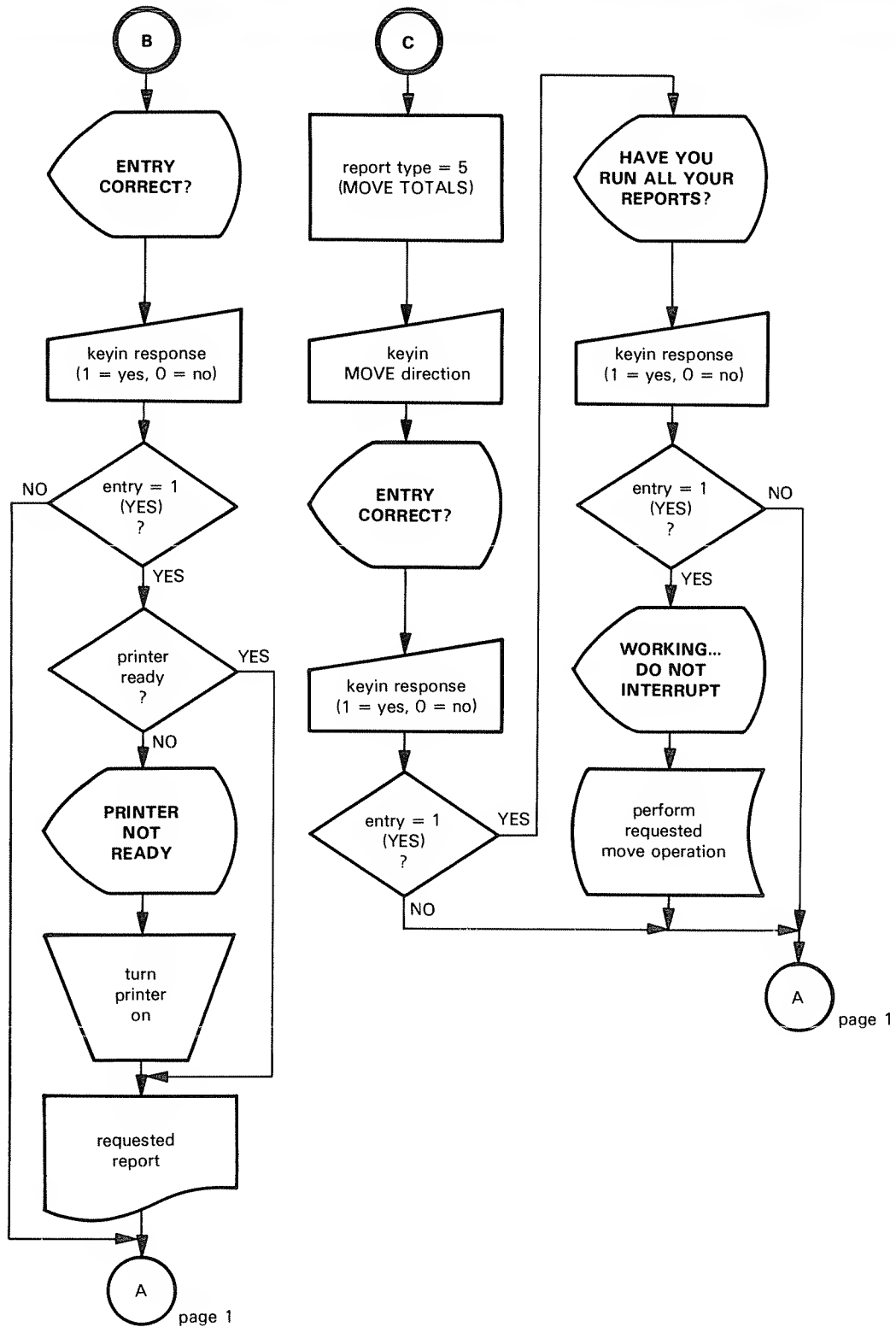
Report 4-7 Quarterly Balance Sheet — 1st Previous Quarter (Page 3 of 4)

| IMPRESSIVE PRODUCTS | | | DATE 05/31/78 |
|---------------------------------------|--------------------------------|----------|---------------|
| QUARTERLY BALANCE SHEET | | | PAGE 3 |
| PREVIOUS QUARTER 1 | | | |
| ACCOUNT | NAME | QUARTER | |
| LIABILITIES & STOCKHOLDERS' EQUITY | | | |
| CURRENT LIABILITIES | | | |
| 21100.0 | NOTES PAYABLE | \$ | 168000.00 |
| 21200.0 | CURRENT MATUR. ON L-T DEBT | | 0.00 |
| 21300.0 | VOUCHERS PAYABLE | | 101250.65 |
| 21400.0 | SALES TAX PAYABLE | | 7894.21 |
| INCOME TAX PAYABLE | | | |
| 21510.0 | FEDERAL | 0.00 | |
| 21520.0 | STATE | 0.00 | |
| | TOTAL | \$ | 0.00 |
| PAYROLL TAXES PAYABLE | | | |
| 21610.0 | FEDERAL INCOME TAX WITHHOLDING | 35748.00 | |
| 21620.0 | FICA | 9542.31 | |
| 21630.0 | FEDERAL UNEMPLOYMENT TAX | 1637.29 | |
| 21640.0 | STATE INCOME TAX WITHHOLDING | 5428.99 | |
| 21650.0 | SDI | 1376.26 | |
| 21660.0 | STATE UNEMPLOYMENT TAX | 1954.26 | |
| | TOTAL | \$ | 55687.11 |
| ACCRUED LIABILITIES | | | |
| 21710.0 | PAYROLL | 0.00 | |
| 21720.0 | VACATION | 8620.00 | |
| 21730.0 | PROPERTY TAXES | 1400.00 | |
| 21790.0 | OTHER ACCRUED LIABILITIES | 0.00 | |
| | TOTAL | \$ | 10020.00 |
| 21810.0 | UNEARNED INCOME | | 500.00 |
| 21820.0 | CUSTOMER OVERPAYMENTS | | 1255.00 |
| 21830.0 | UNIDENTIFIED CUSTOMER RECEIPTS | | 1950.00 |
| | TOTAL CURRENT LIABILITIES | \$ | 346556.97 |
| LONG TERM LIABILITIES | | | |
| 22100.0 | NOTES PAYABLE | | 200000.00 |
| 22200.0 | DEFERRED INCOME TAXES PAYABLE | | 0.00 |
| | TOTAL | \$ | 200000.00 |

Report 4-7 Quarterly Balance Sheet — 1st Previous Quarter (Page 4 of 4)

| IMPRESSIVE PRODUCTS QUARTERLY BALANCE SHEET | | | DATE 05/31/78 PAGE 4 |
|--|----------------------------|------------|-------------------------|
| PREVIOUS QUARTER 1 | | | |
| ACCOUNT | NAME | QUARTER | |
| | STOCKHOLDERS' EQUITY | | |
| 23100.0 | CAPITAL STOCK | \$ | 300000.00 |
| 23200.0 | ADDITIONAL PAID-IN CAPITAL | | 0.00 |
| 23900.0 | RETAINED EARNINGS | | 207555.03 |
| | TOTAL | \$ | 507555.03 |
| TOTAL LIAB. & STOCKHOLDERS' EQ. | | \$ | 1054112.00 |
| DEBIT TOTAL | | 1163012.67 | |
| CREDIT TOTAL | | 1163012.67 | |
| PROOF | | 0.00 | |





PURPOSE: Add, change or delete Account records.

WHEN: As needed.

TO EXIT: Enter an operation code of '0', or SFK15 any time.

Each General Ledger account must have a record on the Account file before any posting may be posted to it in General Ledger Update.

This program allows you to add new accounts and change, delete, or print a listing of existing Account records. As discussed in Chapter 3, you must enter an Account record not only for each regular General Ledger account, but also for each heading, title and total you have included in your chart of accounts.

The initial display appears as CRT 5-1.

CRT 5-1

```
G/L ACCOUNT FILE MAINTENANCE
ENTER OPERATION CODE (0=EXIT; 1=ADD; 2=CHANGE/DELETE; 3=PRINT)
x
<bulletin>
ACCOUNT
1)NAME
2)ACCOUNT TYPE
3)REPORT TYPE
4)NORMAL BALANCE
5)TOTAL LEVEL
6)EXTRA LINE ADV
7)SALES ACCOUNT
8)SPECIAL REPORT
9)THIS MONTH
10)THIS YEAR
11)THIS QTR
12)1ST PREV QTR
13)2ND PREV QTR
14)3RD PREV QTR
15)LAST YEAR
```

d = display only, x = enter only, z = enter or display with option to change

SELECT OPERATION

1) Enter operation code (0-4).

0 - **EXIT.** Program ends. The Menu is loaded.

1 - **ADD.** Add a new Account record to the Account file. Proceed to step 2.

2 - **CHANGE/DELETE.** Change or delete an existing Account record. Proceed to step 4.

3 - **PRINT.** Print a listing of existing G/L Account records. Proceed to step 7.

OPERATION IS ADD

2) Enter account number (0-999999.9/99).

0 - **Abort ADD operation.** Select a new operation, return to step 1.

Account number - Request to add this account to the Account file. A check is made to see if the requested account number is already on the Account file.

If yes, the bulletin ALREADY ON FILE is flashed. A new account number is requested, repeat this step.

If no, new account information is requested; proceed to step 3.

3) Enter field values as requested.

See Table 5-1 for field details. When entry is complete, you may make changes; proceed to step 5.

OPERATION IS CHANGE/DELETE

4) Enter account number (0-999999.9/99).

0 - **Abort CHANGE/DELETE operation.** Select a new operation, return to step 1.

Account number - Request to change or delete this record. A check is made to see if the requested account number is on the Account file.

If yes, display current information. You may make changes, proceed to step 5.

If no, the bulletin NOT ON FILE is flashed. A new account number is requested, repeat this step.

Change or Delete

ENTER FIELD TO CHANGE (99=DELETE)

5) Enter field number (0-15, 99).

0 - **No changes.** Save record on Account file.

If operation is ADD, return to step 2.

If operation is CHANGE/DELETE, return to step 4.

1-15 - **Enter field value when requested.** See Table 5-1 for field details. The next change is requested, repeat this step.

99 - **Request to DELETE this Account record.** Proceed to step 6.

Verify DELETE

ENTER DELETE CODE

6) Verify DELETE operation.

DEL - DELETE operation is effected. This Account record is deleted. The bulletin RECORD DELETED is flashed.

If operation is ADD, return to step 2.

If operation is CHANGE/DELETE, return to step 4.

Anything else - DELETE operation is aborted. The same Account record remains on display, and the next change is requested, return to step 5.

Table 5-1. G/L Account Fields

| Field | Description |
|-------|--|
| 1 | NAME (31 characters). Name or description of account. |
| 2 | ACCOUNT TYPE (0-3). If there is no sub-account number as part of the account number, a '0' Account Type is assigned automatically. See Table 3-E in Chapter 3 for detailed Account Type descriptions. 0 - Regular. 1 - Title. 2 - Total. 3 - Heading. |
| 3 | REPORT TYPE (1-2). 1 - Income Statement. For income and expense 2 - Balance Sheet. For assets and liabilities. |
| 4 | NORMAL BALANCE (1-2). 1 - Debit. 2 - Credit. |
| 5 | TOTAL LEVEL (0-9). Indicate position or level of inclusion when printing account totals. Further discussion provided in Chapter 3. |
| 6 | EXTRA LINE ADVANCE (0-9). 0-8 - The number of blank lines to print between this account and the following record on the General Ledger financial reports. 9 - Printer advance paper to the top of a new page. |
| 7 | SALES ACCOUNT (0-1). Indicate whether this account should apply towards total sales. 0 - No, not a sales account. 1 - Yes, include in sales account percentages |
| 8 | SPECIAL REPORT (0-1). Indicate whether this report should be included on the "special" report which may be printed in the Report program. 0 - No, do not include on the special report. 1 - Yes, include on the special report. |
| 9 | THIS MONTH (-9999999.99 - +9999999.99). Amount which has been posted to this account this month. |
| 10 | THIS YEAR (-9999999.99 - +9999999.99). Amount posted to this account this year. |
| 11 | THIS QUARTER (-9999999.99 - +9999999.99). Amount posted to this account this quarter. |
| 12 | FIRST PREVIOUS QUARTER (-9999999.99 - +9999999.99). Amount posted to this account one quarter prior to current quarter. |
| 13 | SECOND PREVIOUS QUARTER (-9999999.99 - +9999999.99). Amount posted to this account two quarters prior to current quarter. |
| 14 | THIRD PREVIOUS QUARTER (-9999999.99 - +9999999.99). Amount posted to this account three quarters prior to current quarter. |
| 15 | LAST YEAR (-9999999.99 - +9999999.99). Amount posted to this account last year. |

OPERATION IS PRINT

To prepare for this operation load standard paper into the printer, then make sure the printer is turned on and ready to print.

ENTER REPORT TYPE (0=NONE; 1=DESCRIPTIONS; 2=AMOUNTS; 3=BOTH)

7) Enter report type (0-3).

0 - PRINT operation is aborted. A new operation is requested, return to step 1

1 - DESCRIPTIONS. A General Ledger Accounts report listing account descriptive fields (account fields 1-8) will be printed. All account types are included. A sample Descriptions report is shown in Report 5-1. When the report is completed, another report may be printed, repeat this step.

2 - AMOUNTS. A General Ledger Accounts report listing account amount fields (account fields 9-15) will be printed. Only regular type accounts (account type 0) are included. A sample Amounts report is shown in Report 5-2. When the report is completed, another report may be printed, repeat this step.

3 - BOTH. A General Ledger Accounts report including both descriptive and amount fields will be printed. All account types are included, but amounts are printed only for regular type accounts (account type 0). A sample of this type of report is shown in Report 5-3. When the report is completed, another report may be printed, repeat this step.

Report 5-1. General Ledger Accounts ("Descriptions")

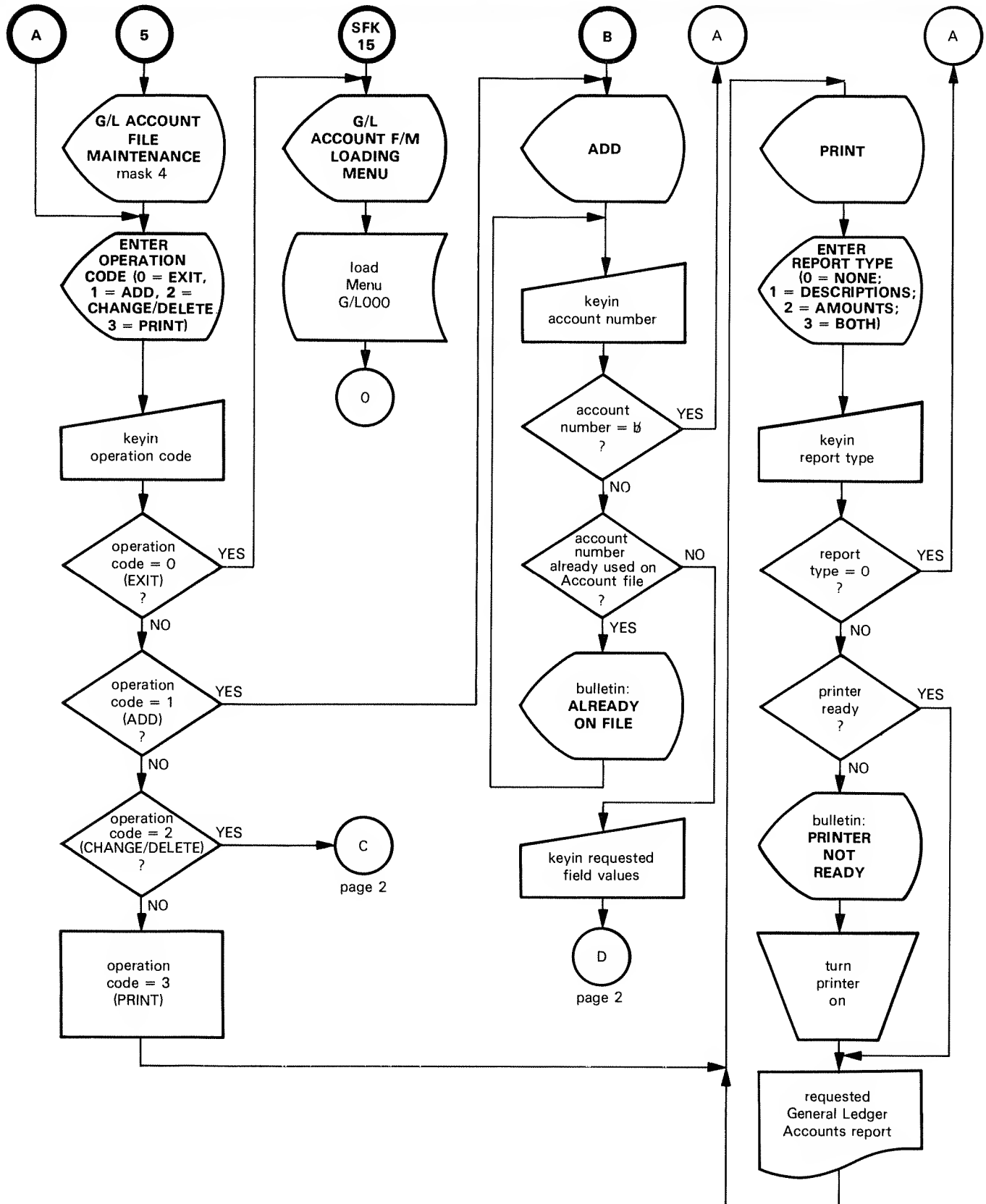
| ACCOUNT NAME | | IMPRESSIVE PRODUCTS GENERAL LEDGER ACCOUNTS | | | | | | | | | | DATE 05/31/78 PAGE 1 | |
|--------------|---------------------------------|--|---------|---------------|----|---------|----------|--|--|--|--|-------------------------|--|
| 10000.0 | ASSETS | SUB S0 | TITLE | BALANCE SHEET | DB | LEVEL 8 | 2 LINES | | | | | SPECIAL REPT | |
| 11000.0 | CURRENT ASSETS | SUB S0 | HEADING | BALANCE SHEET | DB | LEVEL 6 | 1 LINES | | | | | | |
| 11100.0 | CASH | SUB S0 | HEADING | BALANCE SHEET | DB | LEVEL 5 | | | | | | | |
| 11110.0 | REVENUE BANK | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 11150.0 | PETTY CASH | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 11199.0 | REVENUE BANK | SUB S0 | TOTAL | BALANCE SHEET | DB | LEVEL 5 | 1 LINES | | | | | | |
| 11400.0 | ACCOUNTS RECEIVABLE | SUB S0 | HEADING | BALANCE SHEET | DB | LEVEL 5 | | | | | | SPECIAL REPT | |
| 11410.0 | TRADE ACCOUNTS RECEIVABLE | SUB S0 | HEADING | BALANCE SHEET | DB | LEVEL 2 | | | | | | | |
| 11412.0 | FINISHED GOODS SALES RECEIVABLE | | REGULAR | BALANCE SHEET | DB | LEVEL 0 | | | | | | SPECIAL REPT | |
| 11414.0 | CONSULTING FEES RECEIVABLE | | REGULAR | BALANCE SHEET | DB | LEVEL 0 | | | | | | SPECIAL REPT | |
| 11419.0 | ALLOW FOR DOUBTFUL ACCOUNTS | | REGULAR | BALANCE SHEET | CR | LEVEL 0 | | | | | | SPECIAL REPT | |
| 11419.0 | TOTAL | SUB S0 | TOTAL | BALANCE SHEET | DB | LEVEL 2 | | | | | | | |
| 11420.0 | EMPLOYEE RECEIVABLES | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 11490.0 | OTHER ACCOUNTS RECEIVABLE | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 11499.0 | TOTAL | SUB S0 | TOTAL | BALANCE SHEET | DB | LEVEL 5 | 1 LINES | | | | | | |
| 11600.0 | INVENTORY - FINISHED GOODS | SUB S0 | HEADING | BALANCE SHEET | DB | LEVEL 5 | | | | | | | |
| 11610.0 | FINISHED GOODS (AT MFG. COST) | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 11620.0 | RAW MATERIALS | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 11630.0 | OTHER INVENTORY | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 11699.0 | TOTAL | SUB S0 | TOTAL | BALANCE SHEET | DB | LEVEL 5 | 1 LINES | | | | | | |
| 11800.0 | PREPAID EXPENSE | SUB S0 | HEADING | BALANCE SHEET | DB | LEVEL 5 | | | | | | | |
| 11810.0 | PREPAID INSURANCE | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 11820.0 | PREPAID TAXES | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 11890.0 | OTHER PREPAID EXPENSES | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 11899.0 | TOTAL | SUB S0 | TOTAL | BALANCE SHEET | DB | LEVEL 5 | 1 LINES | | | | | | |
| 11900.0 | CONSULTING | SUB S0 | HEADING | BALANCE SHEET | DB | LEVEL 5 | | | | | | | |
| 11900.0 | CONTRACTS-IN-PROCESS | SUB S1 | HEADING | BALANCE SHEET | DB | LEVEL 5 | | | | | | | |
| 11910.0 | DIRECT LABOR | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 11920.0 | OVERHEAD | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 11940.0 | OTHER DIRECT CHARGES | SUB S0 | HEADING | BALANCE SHEET | DB | LEVEL 2 | | | | | | | |
| 11942.0 | DIRECT MATERIALS | | REGULAR | BALANCE SHEET | DB | LEVEL 0 | | | | | | SPECIAL REPT | |
| 11944.0 | OUTSIDE SERVICE | | REGULAR | BALANCE SHEET | DB | LEVEL 0 | | | | | | SPECIAL REPT | |
| 11946.0 | FREIGHT - IN | | REGULAR | BALANCE SHEET | DB | LEVEL 0 | | | | | | SPECIAL REPT | |
| 11948.0 | TRAVEL | | REGULAR | BALANCE SHEET | DB | LEVEL 0 | | | | | | SPECIAL REPT | |
| 11949.0 | TOTAL | SUB S0 | TOTAL | BALANCE SHEET | DB | LEVEL 2 | | | | | | | |
| 11990.0 | CREDITS | | REGULAR | BALANCE SHEET | CR | LEVEL 2 | | | | | | SPECIAL REPT | |
| 11999.0 | TOTAL | SUB 40 | TOTAL | BALANCE SHEET | DB | LEVEL 5 | 1 LINES | | | | | | |
| 11999.0 | TOTAL CURRENT ASSETS | SUB S0 | TOTAL | BALANCE SHEET | DB | LEVEL 6 | TOP/PAGE | | | | | | |
| 13000.0 | DEFERRED PRODUCTION COSTS | SUB S0 | HEADING | BALANCE SHEET | DB | LEVEL 6 | | | | | | | |
| 13010.0 | DIRECT LABOR | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 13020.0 | OVERHEAD | | REGULAR | BALANCE SHEET | DB | LEVEL 2 | | | | | | SPECIAL REPT | |
| 13040.0 | OTHER DIRECT CHARGES | SUB S0 | HEADING | BALANCE SHEET | DB | LEVEL 2 | | | | | | | |
| 13042.0 | DIRECT MATERIALS | | REGULAR | BALANCE SHEET | DB | LEVEL 0 | | | | | | SPECIAL REPT | |
| 13044.0 | OUTSIDE SERVICES | | REGULAR | BALANCE SHEET | DB | LEVEL 0 | | | | | | SPECIAL REPT | |
| 13046.0 | FREIGHT - IN | | REGULAR | BALANCE SHEET | DB | LEVEL 0 | | | | | | SPECIAL REPT | |
| 13049.0 | TOTAL | SUB S0 | TOTAL | BALANCE SHEET | DB | LEVEL 2 | | | | | | | |
| 13990.0 | CREDITS | | REGULAR | BALANCE SHEET | CR | LEVEL 2 | | | | | | SPECIAL REPT | |
| 13999.0 | TOTAL | SUB S0 | TOTAL | BALANCE SHEET | DB | LEVEL 6 | 2 LINES | | | | | | |
| 15000.0 | PROPERTY & EQUIPMENT | SUB S0 | HEADING | BALANCE SHEET | DB | LEVEL 6 | 1 LINES | | | | | | |

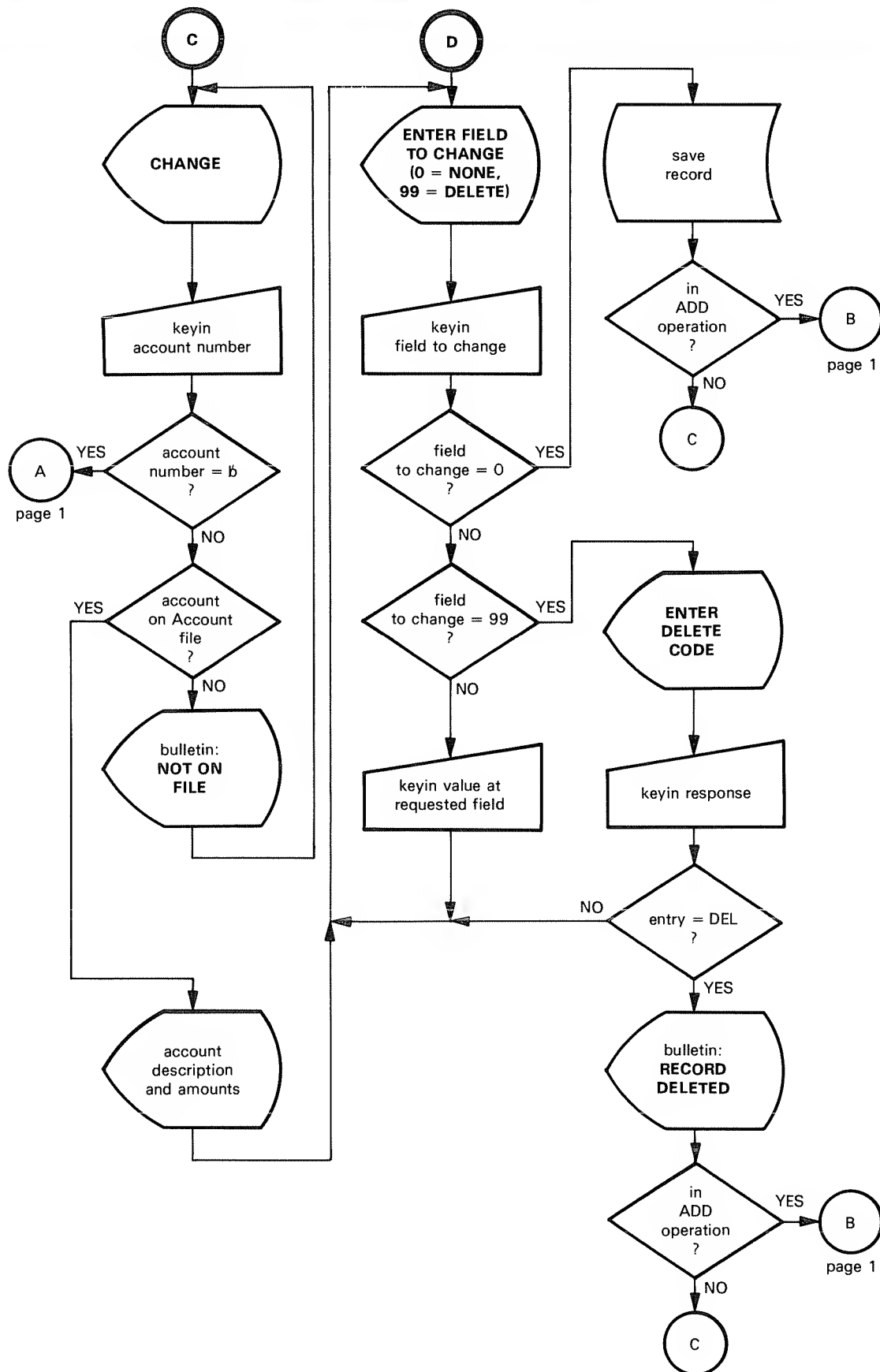
Report 5-2. General Ledger Accounts ("Amounts")

| IMPRESSIVE PRODUCTS GENERAL LEDGER ACCOUNTS | | | | | | | DATE 05/31/78 PAGE 1 | |
|--|---------------------------------|-----------|-----------|-----------|------------|------------|-------------------------|-----------|
| ACCOUNT | NAME | THIS MO | THIS YEAR | THIS QTR | PREV QTR-1 | PREV QTR-2 | PREV QTR-3 | LAST YEAR |
| 11110.0 | REVENUE BANK | 20235.25 | 20235.25 | 20235.25 | 29455.26 | 32400.78 | 35640.86 | 32400.78 |
| 11150.0 | PETTY CASH | 40.00 | 40.00 | 40.00 | 152.15 | 167.36 | 184.10 | 167.36 |
| 11412.0 | FINISHED GOODS SALES RECEIVABLE | 100941.03 | 100941.03 | 100941.03 | 107331.18 | 118064.29 | 129870.72 | 118064.29 |
| 11414.0 | CONSULTING FEES RECEIVABLE | 1500.00 | 1500.00 | 1500.00 | 1500.00 | 1650.00 | 1815.00 | 1650.00 |
| 11419.0 | ALLOW FOR DOUBTFUL ACCOUNTS | 3028.23 | 3028.23 | 3028.23 | 2900.67 | 3190.73 | 3509.81 | 3190.73 |
| 11420.0 | EMPLOYEE RECEIVABLES | 1030.00 | 1030.00 | 1030.00 | 1857.60 | 2043.36 | 2247.69 | 2043.36 |
| 11490.0 | OTHER ACCOUNTS RECEIVABLE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11610.0 | FINISHED GOODS (AT MFG. COST) | 266195.00 | 266195.00 | 266195.00 | 383795.00 | 422174.50 | 464391.95 | 422174.50 |
| 11620.0 | RAW MATERIALS | 929.13 | 929.13 | 929.13 | 1050.87 | 1155.95 | 1271.55 | 1155.95 |
| 11630.0 | OTHER INVENTORY | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11810.0 | PREPAID INSURANCE | 877.24 | 877.24 | 877.24 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11820.0 | PREPAID TAXES | 0.00 | 0.00 | 0.00 | 3507.86 | 3858.64 | 4244.51 | 3858.64 |
| 11890.0 | OTHER PREPAID EXPENSES | 63.50 | 63.50 | 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11910.0 | DIRECT LABOR | 5400.00 | 5400.00 | 5400.00 | 5400.00 | 5940.00 | 6534.00 | 5940.00 |
| 11920.0 | OVERHEAD | 2700.00 | 2700.00 | 2700.00 | 2700.00 | 2970.00 | 3267.00 | 2970.00 |
| 11942.0 | DIRECT MATERIALS | 513.75 | 513.75 | 513.75 | 189.50 | 208.45 | 229.29 | 208.45 |
| 11944.0 | OUTSIDE SERVICE | 86.19 | 86.19 | 86.19 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11946.0 | FREIGHT - IN | 22.07 | 22.07 | 22.07 | 79.12 | 87.03 | 95.73 | 87.03 |
| 11948.0 | TRAVEL | 143.33 | 143.33 | 143.33 | 143.33 | 157.66 | 173.42 | 157.66 |
| 11990.0 | CREDITS | 1000.00 | 1000.00 | 1000.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13010.0 | DIRECT LABOR | 300000.00 | 300000.00 | 300000.00 | 295000.00 | 324500.00 | 356950.00 | 324500.00 |
| 13020.0 | OVERHEAD | 36000.00 | 36000.00 | 36000.00 | 35400.00 | 38940.00 | 42834.00 | 38940.00 |
| 13042.0 | DIRECT MATERIALS | 6770.00 | 6770.00 | 6770.00 | 7000.00 | 7700.00 | 8470.00 | 7700.00 |
| 13044.0 | OUTSIDE SERVICES | 25000.00 | 25000.00 | 25000.00 | 12500.00 | 13750.00 | 15125.00 | 13750.00 |
| 13046.0 | FREIGHT - IN | 0.00 | 0.00 | 0.00 | 51.25 | 56.37 | 62.01 | 56.37 |
| 13990.0 | CREDITS | 0.00 | 0.00 | 0.00 | 546.00 | 600.60 | 660.66 | 600.60 |
| 15110.0 | MACHINERY & EQUIPMENT | 350000.00 | 350000.00 | 350000.00 | 245899.55 | 270489.50 | 297538.45 | 270489.50 |
| 15120.0 | FURNITURE & FIXTURES | 30000.00 | 30000.00 | 30000.00 | 30000.00 | 33000.00 | 36300.00 | 33000.00 |
| 15130.0 | LEASEHOLD IMPROVEMENTS | 2000.00 | 2000.00 | 2000.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15800.0 | CONSTRUCTION-IN-PROCESS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15910.0 | MACHINERY & EQUIPMENT | 100000.00 | 100000.00 | 100000.00 | 93333.00 | 102666.30 | 112932.93 | 102666.30 |
| 15920.0 | FURNITURE AND FIXTURES | 13333.00 | 13333.00 | 13333.00 | 12121.00 | 13333.10 | 14666.41 | 13333.10 |
| 15930.0 | LEASEHOLD IMPROVEMENTS | 571.00 | 571.00 | 571.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21100.0 | NOTES PAYABLE | 180000.00 | 180000.00 | 180000.00 | 168000.00 | 184800.00 | 203280.00 | 184800.00 |
| 21200.0 | CURRENT MATUR. ON L-T DEBT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21300.0 | VOUCHERS PAYABLE | 95467.85 | 95467.85 | 95467.85 | 101250.65 | 111375.71 | 122513.28 | 111375.71 |
| 21400.0 | SALES TAX PAYABLE | 3221.00 | 3221.00 | 3221.00 | 7894.21 | 8683.63 | 9551.99 | 8683.63 |
| 21510.0 | FEDERAL | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21520.0 | STATE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21610.0 | FEDERAL INCOME TAX WITHHOLDING | 16250.00 | 16250.00 | 16250.00 | 35748.00 | 39322.80 | 43255.08 | 39322.80 |
| 21620.0 | FICA | 3915.24 | 3915.24 | 3915.24 | 9542.31 | 10496.54 | 11546.19 | 10496.54 |
| 21630.0 | FEDERAL UNEMPLOYMENT TAX | 783.13 | 783.13 | 783.13 | 1637.29 | 1801.01 | 1981.12 | 1801.01 |
| 21640.0 | STATE INCOME TAX WITHHOLDING | 2659.94 | 2659.94 | 2659.94 | 5428.99 | 5971.88 | 6569.07 | 5971.88 |
| 21650.0 | SDI | 652.35 | 652.35 | 652.35 | 1376.26 | 1513.88 | 1665.27 | 1513.88 |
| 21660.0 | STATE UNEMPLOYMENT TAX | 1495.57 | 1495.57 | 1495.57 | 1954.26 | 2149.68 | 2364.65 | 2149.68 |
| 21710.0 | PAYROLL | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21720.0 | VACATION | 12480.00 | 12480.00 | 12480.00 | 8620.00 | 9482.00 | 10430.20 | 9482.00 |
| 21730.0 | PROPERTY TAXES | 1400.00 | 1400.00 | 1400.00 | 1400.00 | 1540.00 | 1694.00 | 1540.00 |
| 21790.0 | OTHER ACCRUED LIABILITIES | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Report 5-3. General Ledger Accounts ("Both")

| IMPRESSIVE PRODUCTS | | | | | | | | | | DATE 05/31/78 | |
|-------------------------|---------------------------------|--|---------|-----------|------------------|------------|------------|------------|-----------|---------------|--|
| GENERAL LEDGER ACCOUNTS | | | | | | | | | | PAGE 1 | |
| ACCOUNT | NAME | | THIS MO | THIS YEAR | THIS QTR | PREV QTR-1 | PREV QTR-2 | PREV QTR-3 | LAST YEAR | | |
| 10000.0 | ASSETS | | SUB 50 | TITLE | BALANCE SHEET DB | LEVEL 8 | 2 LINES | | SPECIAL | REPT | |
| 11000.0 | CURRENT ASSETS | | SUB 50 | HEADING | BALANCE SHEET DB | LEVEL 6 | 1 LINES | | | | |
| 11100.0 | CASH | | SUB 50 | HEADING | BALANCE SHEET DB | LEVEL 5 | | | | | |
| 11110.0 | REVENUE BANK | | | REGULAR | BALANCE SHEET DB | LEVEL 2 | | | | | |
| | | | | 20235.25 | 20235.25 | 20235.25 | 29455.26 | 32400.78 | 35640.86 | 32400.78 | |
| 11150.0 | PETTY CASH | | | REGULAR | BALANCE SHEET DB | LEVEL 2 | | | SPECIAL | REPT | |
| | | | | 40.00 | 40.00 | 40.00 | 152.15 | 167.36 | 184.10 | 167.36 | |
| 11199.0 | REVENUE BANK | | SUB 50 | TOTAL | BALANCE SHEET DB | LEVEL 5 | 1 LINES | | | | |
| 11400.0 | ACCOUNTS RECEIVABLE | | SUB 50 | HEADING | BALANCE SHEET DB | LEVEL 5 | | | SPECIAL | REPT | |
| 11410.0 | TRADE ACCOUNTS RECEIVABLE | | SUB 50 | HEADING | BALANCE SHEET DB | LEVEL 2 | | | | | |
| 11412.0 | FINISHED GOODS SALES RECEIVABLE | | | REGULAR | BALANCE SHEET DB | LEVEL 0 | | | SPECIAL | REPT | |
| | | | | 100941.03 | 100941.03 | 100941.03 | 107331.18 | 118064.29 | 129870.72 | 118064.29 | |
| 11414.0 | CONSULTING FEES RECEIVABLE | | | REGULAR | BALANCE SHEET DB | LEVEL 0 | | | SPECIAL | REPT | |
| | | | | 1500.00 | 1500.00 | 1500.00 | 1500.00 | 1650.00 | 1815.00 | 1650.00 | |
| 11419.0 | ALLOW FOR DOUBTFUL ACCOUNTS | | | REGULAR | BALANCE SHEET CR | LEVEL 0 | | | SPECIAL | REPT | |
| | | | | 3028.23 | 3028.23 | 3028.23 | 2900.67 | 3190.73 | 3509.81 | 3190.73 | |
| 11419.0 | TOTAL | | SUB 50 | TOTAL | BALANCE SHEET DB | LEVEL 2 | | | | | |
| 11420.0 | EMPLOYEE RECEIVABLES | | | REGULAR | BALANCE SHEET DB | LEVEL 2 | | | SPECIAL | REPT | |
| | | | | 1030.00 | 1030.00 | 1030.00 | 1857.60 | 2043.36 | 2247.69 | 2043.36 | |
| 11490.0 | OTHER ACCOUNTS RECEIVABLE | | | REGULAR | BALANCE SHEET DB | LEVEL 2 | | | SPECIAL | REPT | |
| | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 11499.0 | TOTAL | | SUB 50 | TOTAL | BALANCE SHEET DB | LEVEL 5 | 1 LINES | | | | |
| 11600.0 | INVENTORY - FINISHED GOODS | | SUB 50 | HEADING | BALANCE SHEET DB | LEVEL 5 | | | | | |
| 11610.0 | FINISHED GOODS (AT MFG. COST) | | | REGULAR | BALANCE SHEET DB | LEVEL 2 | | | SPECIAL | REPT | |
| | | | | 266195.00 | 266195.00 | 266195.00 | 383795.00 | 422174.50 | 464391.95 | 422174.50 | |
| 11620.0 | RAW MATERIALS | | | REGULAR | BALANCE SHEET DB | LEVEL 2 | | | SPECIAL | REPT | |
| | | | | 929.13 | 929.13 | 929.13 | 1050.87 | 1155.95 | 1271.55 | 1155.95 | |
| 11630.0 | OTHER INVENTORY | | | REGULAR | BALANCE SHEET DB | LEVEL 2 | | | SPECIAL | REPT | |
| | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 11699.0 | TOTAL | | SUB 50 | TOTAL | BALANCE SHEET DB | LEVEL 5 | 1 LINES | | | | |
| 11800.0 | PREPAID EXPENSE | | SUB 50 | HEADING | BALANCE SHEET DB | LEVEL 5 | | | | | |
| 11810.0 | PREPAID INSURANCE | | | REGULAR | BALANCE SHEET DB | LEVEL 2 | | | SPECIAL | REPT | |
| | | | | 877.24 | 877.24 | 877.24 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 11820.0 | PREPAID TAXES | | | REGULAR | BALANCE SHEET DB | LEVEL 2 | | | SPECIAL | REPT | |
| | | | | 0.00 | 0.00 | 0.00 | 3507.86 | 3858.64 | 4244.51 | 3858.64 | |
| 11890.0 | OTHER PREPAID EXPENSES | | | REGULAR | BALANCE SHEET DB | LEVEL 2 | | | SPECIAL | REPT | |
| | | | | 63.50 | 63.50 | 63.50 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 11899.0 | TOTAL | | SUB 50 | TOTAL | BALANCE SHEET DB | LEVEL 5 | 1 LINES | | | | |
| 11900.0 | CONSULTING | | SUB 50 | HEADING | BALANCE SHEET DB | LEVEL 5 | | | | | |
| 11900.0 | CONTRACTS-IN-PROCESS | | SUB 51 | HEADING | BALANCE SHEET DB | LEVEL 5 | | | | | |
| 11910.0 | DIRECT LABOR | | | REGULAR | BALANCE SHEET DB | LEVEL 2 | | | SPECIAL | REPT | |
| | | | | 5400.00 | 5400.00 | 5400.00 | 5400.00 | 5940.00 | 6534.00 | 5940.00 | |
| 11920.0 | OVERHEAD | | | REGULAR | BALANCE SHEET DB | LEVEL 2 | | | SPECIAL | REPT | |
| | | | | 2700.00 | 2700.00 | 2700.00 | 2700.00 | 2970.00 | 3267.00 | 2970.00 | |
| 11940.0 | OTHER DIRECT CHARGES | | SUB 50 | HEADING | BALANCE SHEET DB | LEVEL 2 | | | | | |
| 11942.0 | DIRECT MATERIALS | | | REGULAR | BALANCE SHEET DB | LEVEL 0 | | | SPECIAL | REPT | |
| | | | | 513.75 | 513.75 | 513.75 | 189.50 | 208.45 | 229.29 | 208.45 | |
| 11944.0 | OUTSIDE SERVICE | | | REGULAR | BALANCE SHEET DB | LEVEL 0 | | | SPECIAL | REPT | |
| | | | | 86.19 | 86.19 | 86.19 | 0.00 | 0.00 | 0.00 | 0.00 | |





PURPOSE: Recover wasted space in the G/L Account file.

WHEN: End of year, or as needed.

TO EXIT: Enter an initial response of [RETURN].

When records are "deleted" through Account File Maintenance, the space on the file is not automatically reused. This wasted space builds up over time. Reorganize is run to recover wasted space within the file. At the same time, Account records are reordered in account number order so that record accessing will be most efficient after reorganization.

The program we supply in this book merely loads the real reorganize program. Your programmer may supply you with additional instructions if he deems them necessary for running the reorganize program which he installs.

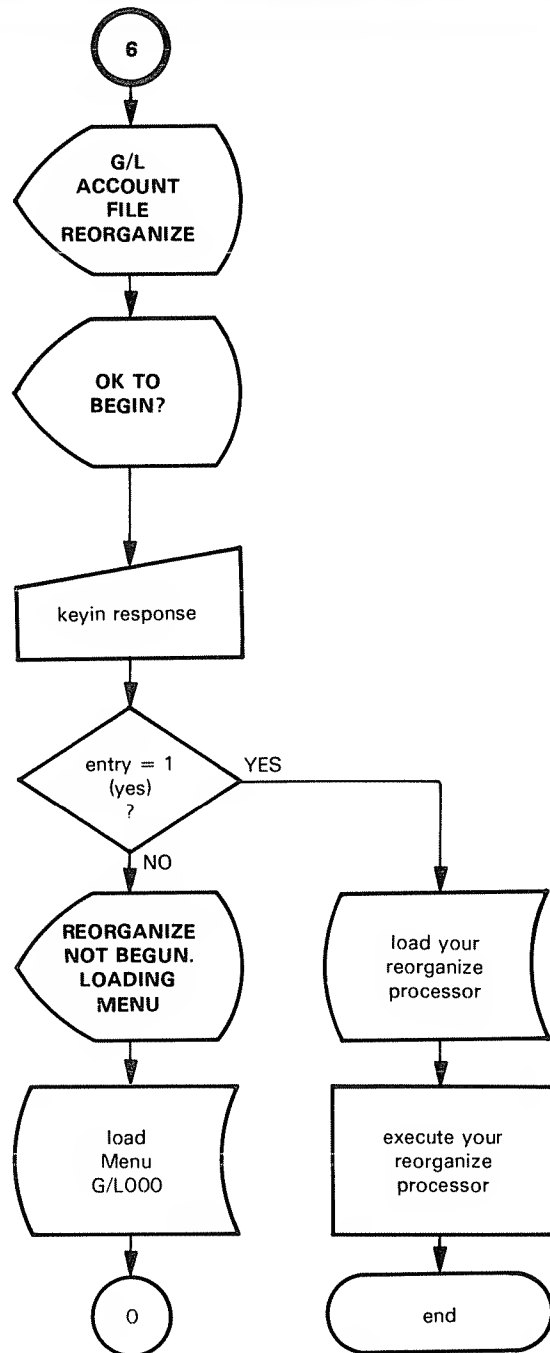
This program requires virtually no user action. You need merely tell it when to begin.

START AND END

G/L ACCOUNT FILE REORGANIZE
OK TO BEGIN?

1) Start reorganize? (1-0)

1 - Yes, reorganize. The reorganize processor is loaded. Continue according to your programmer's instructions.
Anything else - No, exit. End Program. The Menu is loaded.



Chapter Five

SPECIAL HARDWARE AND BASIC FEATURES

The General Ledger programs were developed and tested on a Wang Laboratories 2200B minicomputer system with 16K bytes of program memory (that does not include the BASIC interpreter), and with a disk to hold the program and data files. This chapter describes the features of the Wang system that are most likely to be different from one computer to the next. Only features that affect the General Ledger programs are included.

CRT DISPLAY SCREEN

The Wang 2200B has a 16-row by 64-column CRT display screen, which the programs use for operator prompting and data review. If you have a smaller CRT screen on your computer system, you will have to redo the CRT layouts that do not fit your screen and rewrite the programs to use your layouts. Program changes will probably not be necessary if your CRT screen is larger, since the programs will just ignore any extra space.

The CRT cursor can be positioned anywhere on the screen prior to displaying or inputting data without affecting characters already displayed. This means it is possible to display any part of a line without having to redisplay the entire screen or even the whole line. This feature is very useful for displaying data from different records of the same file, for example. A program can clear the screen and display a mask (the labels that describe the record's fields). Then, in response to an operator entry, it can fill in the mask with the values for a specific record. Values from different records can be displayed subsequently without affecting the mask. New values for specific data fields can be entered right where the old values were displayed.

The CRT display speed is selectable. This feature is used to display flashing bulletins.

The CRT display has a standard 64-element ASCII character set of upper-case letters, digits, punctuation marks, arithmetic operators, relational operators, etc. It also recognizes the special hexadecimal codes listed in Table 5-A.

Table 5-A. Special CRT Hexadecimal Codes

| Hexadecimal Code | CRT Action |
|------------------|---------------------------------|
| 01 | Cursor home (upper left corner) |
| 03 | Clear screen and cursor home |
| 08 | Cursor left one space (←) |
| 09 | Cursor right one space (→) |
| 0A | Cursor down one line (↓) |
| 0C | Cursor up one line (↑) |

KEYBOARD

The keyboard used for manual data entry includes standard alphabetic, numeric, and punctuation keys. In addition, there are 16 special function keys (SFK's). General Ledger only uses SFK15. Pressing SFK15 during normal keyboard entry generates a hexadecimal code 0F which the program interprets as a request from the operator to return to the Menu. Instead, you could reload the Menu program whenever the keyboard generates hexadecimal code 03. Simultaneously depressing the CONTROL and C keys will generate hexadecimal 03 on many keyboards.

HIGH-SPEED OUTPUT

A 132-column printer is the standard high-speed output device for all reports. It has a standard 64-element ASCII character set of upper-case letters, digits, punctuation marks, arithmetic operators, relational operators, etc. It also uses special hexadecimal code 01 (no printed output) and 0C (top of form).

If your printer has more than 132 columns, the programs will ignore the excess columns. On the other hand, a smaller printer will require changing the programs that print full width reports. You will have to redesign the reports to print a shorter line, either by deleting some information or by printing some information on extra lines.

NUMERICS AND NUMERIC EXPRESSIONS

A numeric expression can be a variable, function or constant. It can also be any valid (in the conventional algebraic sense) combination of variables, functions and constants connected by arithmetic operators.

Numeric constants can be integers (signed or unsigned) or floating point numbers (signed or unsigned). They can be written using standard decimal notation, for example:

2
+2
-3.675
1234.56
-123456
-0.000001

Numeric constants can also be written using scientific notation. The letter E is used to indicate "times 10 to the power", as follows:

0.0001 can be written as 1E-4
100 can be written as 1E2
1000 can be written as 1E3

A numeric variable can be a letter or a letter followed by a digit. In addition to simple numeric variables, singly or doubly subscripted array variables can also be used. Numeric arrays must always be dimensioned, using a DIM statement, on a line preceding the first array reference in the program. Subscripts cannot be less than 1 nor greater than 255.

The same letter may be used to represent a simple variable and an array name in the same program. Thus, A and A(1) can both be used in the same program; they are independent and unrelated variables. Singly and doubly subscripted arrays may not share the same name, however. All simple numeric variables and each element of a numeric array are automatically set to zero before program execution.

The precedence rules for evaluating numeric expressions are:

- 1) Evaluate expressions enclosed in parentheses
- 2) Exponentiate
- 3) Multiply or Divide
- 4) Add or Subtract

ALPHANUMERICS (STRINGS)

Alphanumeric variables are named with either a letter followed by a dollar sign, or with a letter followed by a digit followed by a dollar sign. Singly and doubly subscripted alphanumeric arrays can also be used, and are named the same way as simple alphanumeric variables. A simple variable and an array can have the same name in the same program. Thus, A\$ and A\$(1) can both be used in the same program; they are independent and unrelated variables. Singly and doubly subscripted arrays cannot have the same name.

The maximum length of a simple alphanumeric variable can be defined in a DIM statement, and must be between 1 and 64. Undimensioned variables default to a maximum length of 16 characters. A variable's length must be dimensioned on a line that precedes its first reference in a program, or the default length will be used.

Singly and doubly subscripted alphanumeric arrays are also dimensioned using the DIM statement. Each subscript must be between 1 and 255. Array element maximum length may also be specified (all elements have the same maximum length: between 1 and 64 characters). If the element length is not specified, it defaults to 16 characters.

Following is an example of alphanumeric variable and array dimensioning:

```
100 DIM A$,A1$3,A2$40,A$(5),B$(5,2)6,B1$(3,3)
```

A\$ is a simple alphanumeric variable with a maximum length of 16 characters. A1\$ is a simple alphanumeric variable with a maximum length of 3, A2\$ is a simple alphanumeric variable with a maximum length of 40, A\$() is an alphanumeric array with 5 elements, each having a length of 16, B\$() is a doubly subscripted alphanumeric array with 10 total elements, each having a length of 6, and B1\$() is a doubly subscripted alphanumeric array with a total of 9 elements, each having a length of 16.

During program execution, **simple alphanumeric variables and alphanumeric array elements (collectively termed "string variables" in the following paragraphs) may be assigned values shorter than their maximum length.** If this happens, trailing blanks are automatically added to fill out the variable. Trailing blanks are not considered to be part of string values. String variables are assigned the value of one blank before program execution begins.

There are three built-in alphanumeric functions which may be implemented differently in other versions of BASIC:

- 1) **STR (string variable, expression [,expression])** causes a substring of the specified string variable to be used. The substring starting character is denoted by the first expression, and its length is given (optionally) by the second expression. If no length is specified, the remainder of the string is used (up to, but not including any trailing blanks). When the STR function is used in a LET statement, characters are transferred as illustrated in Table 5-B.
- 2) **LEN (string variable)** determines the number of characters in the specified variable, excluding trailing blanks. For example, if A\$ = "AB C", then LEN (A\$) = 4.
- 3) **HEX (hexadecimal number)** generates the character specified by the hexadecimal digits. For example, PRINT HEX (41422043) will print AB C.

Table 5-B. Using STR with LET

| DIM A\$13,B\$13 A\$ = "1234567890 " B\$ = "ABCDEFGHJIJ " | |
|--|-------------------|
| LET statement | Value of A\$ |
| A\$ = B\$ | "ABCDEFGHJIJ " |
| STR(A\$,2) = B\$ | "1ABCDEFGHJIJ " |
| STR(A\$,2,2) = B\$ | "1AB4567890 " |
| A\$ = STR(B\$,2) | "BCDEFGHJIJ " |
| STR(A\$,2) = STR(B\$,2) | "1BCDEFGHJIJ " |
| STR(A\$,2,2) = STR(B\$,2,2) | "1BC4567890 " |
| A\$ = STR(B\$,2,3) | "BCD " |
| STR(A\$,2) = STR(B\$,2,3) | "1BCD567890 " |
| STR(A\$,2,2) = STR(B\$,2,3) | "1BC4567890 " |
| STR(A\$,2,2) = STR(B\$,2,1) | "1B34567890 " |

COMMON VARIABLES

Common variables can be defined using a **COM** statement (similar to **DIM**). They retain their values from one program to the next. The Menu uses a common variable to hold the file name of the program to be loaded while it is loading a keyed access subroutine package (see Chapter 6, page 91).

Reorganize uses common variables to pass file names to the final reorganize program.

BASIC SYNTAX

In Wang BASIC, there can be more than one program statement on a line. Each statement except the last must be terminated with a colon. Thus, only the first statement on the line can (and must) have a line number.

Wang's BASIC interpreter ignores spaces in program text, but we have included them for better readability.

BASIC STATEMENTS

Quite a few of the program statements used in this book are unique to Wang's extended BASIC. They are listed below in two groups: general and disk access statements. Each of these statements is shown in detail, along with alternate methods of performing the same function in standard BASIC wherever practicable. The following symbols are used in statement descriptions:

| SYMBOL | EXPLANATION |
|---------------|---|
| #n | Logical file number n. Used for data file identification. Example: #1 |
| "name" | One- to eight-character disk file name enclosed in quotes. Examples: "G/L000", "G/LOF110" |
| argument list | A series of alphanumeric and/or numeric variables and/or array names. Example: A\$, B, C\$(), D() |
| expression | A numeric expression. Example: A(1)*3 10-(Z/20) |
| line number | One- to four-digit BASIC line number. Example: 6000 |
| XX | Two hexadecimal digits regarded as one byte of data. Examples: 0A, 5F, FF |
| { } | One of the enclosed items is required. |
| [] | The enclosed item is optional. |
| variable | An alphanumeric or numeric variable. Examples: A\$, X0 |
| image | [±] [##...] [.] [##...] Further explanation at statements that use it |

GENERAL STATEMENTS

• CONVERT expression TO alphanumeric variable, (image)

Example: 100 CONVERT A*3 TO A\$, (##.##)

Convert the value of the numeric expression to an ASCII character string using the specified image. Images observe the following rules:

- 1) Starting with a plus (+) sign puts the sign of the expression's value (+ or -) into the string.
- 2) Starting with a minus (-) sign puts a blank for positive values or a minus (-) for negative values into the string.
- 3) An unsigned image generates an unsigned string.
- 4) The pre-decimal digits are right justified at the decimal point with zero fill. The post-decimal digits are left justified at the decimal point with zero fill.

This command is generally used to facilitate manipulation of individual digits in a numeric value. You can usually isolate digits with a series of expressions that use the INT (integer) function.

- **CONVERT alphanumeric variable TO numeric variable**

Example: CONVERT A\$ TO A

Convert the ASCII representation of a number to a numeric value. This statement can be used to change a number in ASCII format (isolated by the previous version of CONVERT) back into numeric form.

- **DEFFN' integer (variable [, variable...])**

Example: 100 DEFFN' 32(A3)

Define the starting point of a marked subroutine. Marked subroutines can be called by using a GOSUB' statement (see GOSUB'). Additionally, subroutine '15 can be called by pressing SFK15 whenever keyboard input is allowed (see KEYIN). **Marked subroutines can receive the values of parameters passed to them by the main program.** The variables enclosed in parentheses that form the optional parameter list in the DEFFN' statement receive the values of corresponding arguments in the calling GOSUB' statement (see GOSUB'). These marked subroutines can be replaced by standard "line number" subroutines by removing the DEFFN' statement and changing the calling sequence as described under GOSUB'.

- **GOSUB' integer [(subroutine argument [, subroutine argument...])]**

Example: 200 GOSUB' 32(256)

Branch to the subroutine marked by the corresponding DEFFN' statement. Then when a RETURN statement occurs, branch back to the statement following the GOSUB'. A subroutine argument can be an alphanumeric variable or a numeric expression. Subroutine arguments must agree in number and type with the parameter list in the DEFFN' statement. The easiest way to explain the interaction of these two lists is to illustrate how the numbered subroutine could be replaced by a standard BASIC "line number" subroutine.

| Standard | Wang |
|--------------------------|---------------------------------------|
| 100 A = X+Y | . |
| 110 B = 3 | . |
| 120 C\$ = "TAXABLE PAY " | . |
| 130 GOSUB 500 | 130 GOSUB' 100 (X+Y,3,"TAXABLE PAY ") |
| . | . |
| . | . |
| . | . |
| 500 PRINT C\$;A+B | 490 DEFFN' 100 (A,B,C\$) |
| 510 RETURN | 500 PRINT C\$;A+B |
| | 510 RETURN |

Both of the programs above do the same thing. Values are assigned to variables A,B and C\$ prior to the subroutine call, but using different techniques.

- **HEXPRINT** { alphanumeric variable } [{ alphanumeric variable } { alphanumeric array designator } ...] [;]

Example: 100 HEXPRINT A\$

Print the hexadecimal representation of the characters in the alphanumeric variables.

- **%[chr] fmt [chr fmt...]**

where chr = any sequence of one or more printable characters (except #)

$$\text{fmt} = \begin{bmatrix} \$ \\ + \\ - \end{bmatrix} [\# [,] .] [.] [\# \dots]$$

Example: 100 % -###.## LESS -## ## = -###.##

Specify the format of printed output generated by the PRINTUSING statement, according to the following rules:

- 1) Starting with a plus (+) sign causes the value's sign (+ or -) to print immediately preceding the first digit.
- 2) Starting with a minus (-) sign causes a blank for positive values or a minus (-) sign for negative values to print immediately preceding the first digit.
- 3) Starting with a dollar (\$) sign causes a dollar sign to print immediately preceding the first digit.
- 4) If neither a plus (+), minus (-), nor dollar (\$) sign is used and the value is negative, a minus (-) sign is printed before printing the formatted value (the line is one character longer).
- 5) Pre-decimal digits are right adjusted with blank fill. Post-decimal digits are left adjusted and truncated or zero filled. Values too large for the format cause the format specification to print (i.e., #'s are printed instead of digits).
- 6) Alphanumeric values are left justified with blank fill or truncation on the right.

- **INIT ((XX "character") { alphanumeric variable } [{ alphanumeric variable } ...]**

Example: 100 INIT("A")A\$

Initialize every character of each alphanumeric variable or array on the specified list to the character in parentheses. INIT can be replaced by one or more LET statements within a FOR/NEXT loop.

- **KEYIN alphanumeric variable, line number, line number**

Example: 385 KEYIN X\$, 395, 525

Accept a single character from the keyboard without echoing it to the CRT. If no character is ready, continue program execution with the next BASIC statement. If SFK15 was pressed, continue program execution at the second line number. If any other key was pressed, continue execution at the first line number. Refer to the discussion of SFK's earlier in this chapter.

- **NUM (alphanumeric variable)**

Example: 100 X = NUM(A\$)

This built-in function determines the number of sequential valid numeric characters (that is, the digits 0 through 9, E,.,+,-) in the specified alphanumeric variable.

- **PACK (image)** {alphanumeric variable
alphanumeric array name} FROM {numeric array
name expression} [{numeric array
name expression} ...]

Example: 100 PACK (##.##)A\$() FROM A()

Pack the numeric values from the specified numeric expressions into the specified alphanumeric variables, using the provided image, in binary coded decimal (BCD) format.

- 1) Each byte (i.e., each character) of the receiving alphanumeric variables can hold two digits.
- 2) The sign (+ or -), if present, takes one-half byte.
- 3) Absolute values are packed when no sign is specified.
- 4) No decimal point is packed. The decimal point is restored by the UNPACK image.
- 5) Post-decimal digits are truncated or zero filled as necessary, and pre-decimal digits are zero filled.

PACK effectively reduces the amount of space needed to store numeric values. It can be omitted and the numeric values stored as numeric variables.

- **PRINTUSING line number [,print element {;} ...] [;]**

Example: 200 PRINTUSING 100,A,B,A-B

Print the values of the print elements according to the format specified by the image located at the referenced line number. If there are more print elements than formats in the image statement, the image is reused starting with the first format. A PRINT statement can be used in place of a PRINTUSING statement, but columns will not line up as well.

- **SELECT select parameter [,select parameter...]**

Example: 100 SELECT #1B10,PRINT 215

Select which disk to use in disk operations, or whether to print on CRT or printer. The CRT print speed can also be selected.

- **UNPACK (image)** {alphanumeric array name
alphanumeric variable} TO {numeric array name
numeric variable} [{numeric array name
numeric variable} ...]

Example: 150 UNPACK(##.##)A\$() TO A()

Unpack numeric values packed in binary coded decimal (BCD) format by a PACK statement.

DISK ACCESS STATEMENTS

- **DATALOAD DC [#n,] argument list**

Example: 100 DATALOAD DC #1,J\$()

Read a logical data record from disk file #n (#0 if #n not specified) and assign the values to the variables in the argument list. Each time this statement is executed, the next sequential logical record is read from the data file. If there are more variables in the argument list than values in the logical record, another logical record is read. If there are more values than variables, the excess data is ignored. Executing this statement updates the current sector address for the file to the starting address of the next consecutive logical record. If an end-of-file record is encountered, the end-of-file condition is set.

- **DATALOAD DC OPEN T [#n,] "name"**

Example: 100 DATALOAD DC OPEN T #1, "JOB"

Open a data file for subsequent loading and saving of data. The logical file number specified (#n) is assigned to the file name provided. Subsequent references to the opened file are via the logical file number. Logical file 0 is used if no logical file number is specified. Files are automatically closed when a program is ended.

- **DATASAVE DC [#n,] {END
argument list}**

Example: 100 DATASAVE DC #1,J\$()

Write the values of the variables in the argument list onto the disk as one logical record. Start at the current sector address associated with the specified file. Specifying the END parameter causes an end-of-file record to be written. Update the file's current sector address to the sector following the last one written (except after END).

- **DBACKSPACE [#n,] {BEG
expression S}**

Example: 100 DBACKSPACE BEG

If the BEG parameter is specified, set the current sector address to the beginning sector address of the specified file. Otherwise, decrease the current sector address by the truncated value of the expression.

- **DSKIP [#n,] {END
expression S}**

Example: 100 DSKIP 3*A S

If the END parameter is specified, set the current sector address to the end-of-file record address for the specified file. Otherwise, increase the current sector address by the truncated value of the expression.

- **DATALOAD BA T [#n,] (sector address, variable) alphanumeric array name**

Example: 100 DATALOAD BA T #3,A\$()

Read one sector (256 bytes) of unformatted data at the specified sector address. Set the variable to the next consecutive sector address after the read.

- **DATASAVE BA T [#n,] (sector address, variable) alphanumeric array name**

Example: 100 DATASAVE BA T #3,A\$()

Write one sector (256 bytes) of unformatted data at the specified sector address. The variable receives the address of the next consecutive sector.

- **LIMITS [#n,] ["name"] variable 1, variable 2, variable 3**

Example: 100 LIMITS T #1,A,B,C

If the file name is specified, variable 1 receives the file start address, variable 2 receives the file end address and variable 3 receives the number of sectors currently used plus 2. If no name is used for the logical file number specified, variable 1 receives the start address, variable 2 receives the end address and variable 3 receives the current address.

- **LOAD DC T [#n,] {alphanumeric variable
"name"} [,line number 1 [,line number 2]]**

Example: LOAD DCT "G/L000"

Load a program under program control by performing the following functions:

- 1) Stop current program execution.
- 2) Clear program lines from memory, starting with line number 1 and ending with line number 2. If line number 2 is not specified, clear all lines starting with line number 1. If no line numbers are specified, clear all program lines.
- 3) Clear all non-common variables.
- 4) Load the specified program. The program being loaded will be combined with any program lines present; a loading line replaces an existing line having the same line number.
- 5) Run the program now in memory, starting at the first specified line number (if none specified, start with the lowest line number in memory).

Chapter Six

CHANGING GENERAL LEDGER

The General Ledger programs in this book are fairly general purpose, but you still may want to (or have to) make changes to them. This chapter discusses some of the changes you can make, but in no way exhausts all possibilities for program modification. Before you attempt to make any changes, you should be thoroughly familiar with the standard version of General Ledger. This means knowing generally what each program does and how all of the programs work together. It also means knowing in detail just how each program you are going to change works. You must know what is on each data file, how the data files interact, and especially how the data files are used by the programs you intend to change. You will have to know how to change CRT masks. Finally, you will find that actually writing the program changes will be much easier if you know how the various common subroutines work — including the keyed file accessing subroutines.

Throughout this chapter, we identify programs both by their Menu name (for example, Reports or Account File Maintenance) and their program file name (for example, G/L040 or G/L050). The program listings in Chapter 8 are identified by program file name.

PASSWORD

One thing you are sure to want to change is the password. In Menu G/L000 line 6100, you will find a call to subroutine '37 requesting entry of the four-character password. The next line verifies the entry. Replace the letters PASS with your own password, and if your password is not four characters long, change the '37 subroutine call to input the correct length password.

PROGRAMMABLE PROGRAM LOAD

We took advantage of the Wang LOAD DC statement's ability to add new program lines to some or all of an existing program in developing the Menu program. **The Menu loads programs in two steps. First, it loads a package of keyed access subroutines (according to the parameter in the Menu's DATA list), then it loads the main program.** This way, the package of subroutines exists only once on the disk instead of being duplicated with each program that uses it.

You can still use the Menu to control program loading even if your BASIC cannot combine programs under program control, as long as it can load another program under program control (first erasing the existing program). Change Menu G/L000 to disregard the subroutine package type code (in the DATA table), always loading just the actual program (not loading a set of subroutines first). Also, be sure that every program on the disk includes the keyed accessing subroutines it needs.

If your BASIC has no provisions for programmable loading of other programs, you will not be able to use the Menu at all. In this case, you will have to load programs as you need them, by program file name or whatever scheme your computer system employs. You will have to change every program so that it stops when it is finished, rather than attempting to reload the Menu.

TESTING FOR PRINTER READY

Every program that prints a report tests the printer to make sure it is on and ready to print. The first step of the test is to display the bulletin PRINTER NOT READY on the CRT. Then the program tries to "print" non-printing character codes on the printer. If the printer is not ready, the computer waits in a state of suspended animation. As soon as the printer is ready, the non-printing character "prints" on the printer, the program clears the bulletin from the CRT, and the program continues.

If your computer-printer interface does not go into suspended animation like this, you will have to omit or modify subroutine '60 in all programs that use it (see Table 7-B).

MULTIPLE COMPANIES

General Ledger does not have the facilities for built-in multiple company operations the way the Payroll described in *Payroll With Cost Accounting* does. You can implement multiple company General Ledger operations by having separate General Ledger disks for each different company. Of course, this actually means you have a separate General Ledger for each company, rather than one General Ledger for all companies.

FILE REORGANIZE

The Account File Reorganize program (G/L060), described in Chapter 4 on page 81, automatically loads Wang's file reorganize utility subsystem starting with KFAM3503, which in turn loads other Wang reorganize subsystem modules. Wang provides the reorganize utilities with their Integrated Support System (ISS). They are described in the ISS user's manual.

KFAM3503 requires a work file the same size as the Account file, G/L0F110. The work file can be on a different disk than G/L0F110. If you do not have enough space for such a work file, you can use Wang's utility KFAM3003 instead of G/L060-KFAM3503-etc. KFAM3003 is a stand-alone program that reorganizes the Account file in place. The ISS manual provides operating instructions.

If you do not have a Wang computer, use your computer's reorganize utility program. Some computer systems don't need file reorganize programs because they dynamically re-use space freed by record deletion. Your file reorganize program may interface to G/L060, or you may have a stand-alone utility.

CONVERTING KEYED ACCESSING TO RANDOM ACCESSING

Some versions of BASIC are not capable of keyed accessing; you have to provide the exact location of the record you want to access. This poses no problem for sequentially accessed files (even if your program has to increment its own pointer to randomly access the next sequential record).

The Account file is designed for keyed file accessing, with the Account Number field as the key. Thus the account number has no direct relationship to the Account record's physical position on the Account file. In other words, there is no combination of addition, subtraction, multiplication, or division operations you can perform on an account number that will tell you where to find the corresponding Account record. Instead, the account numbers logically group Account records. Related accounts have similar account numbers. The chart of accounts in Table 3-C on page 15 illustrates this. For example, account numbers with a first digit of '1' are Asset accounts. Further, if the second digit is '5', they are Property and Equipment assets. If the third digit is '1', the accounts are Cost of property and equipment assets.

While this scheme is certainly useful, it is not indispensable. Account numbers can be a function of the record number; in fact, the account number can be the same as the record number. You need make only minor program modifications to effect this change.

As published, the programs retrieve Account file data in a two-step process. First, they locate the desired record by executing a statement with the following format:

```
GOSUB'13x ( ~ )
```

where *x* is a digit between 0 and 9. The second step actually reads the data, and is executed with a statement with this format:

```
DATA LOAD DC #1,L$,D$
```

With random accessing, there is no need for a subroutine to locate Account records, since the account number directly specifies the record location. So you can delete all of the GOSUB'13x (~) statements. You must also replace the DATA LOAD DC statement with a statement or statements that will read the data for the record number specified by the account number.

In addition, there are some specific changes to the Reports program (G/L050). This program assumes that balance sheet accounts start with account number 10000.0 and that income and expense statement accounts start with account number 30000.0. Change lines 6180 and 6200 to retrieve your first balance sheet account and income and expense statement account, respectively.

This same program assumes that account number 99999 0 is a special record containing sales account totals (see page 23) Change lines 6160 and 6670 to use the record number of your special sales account totals record instead.

This scheme for random accessing of the Account file affects only the account numbering. You must still observe the other rules for setting up your chart of accounts in the Account file that we explained in Chapter 3. Among other things, this means that Asset accounts must precede Liability accounts, which must precede Income accounts, which must precede Expense accounts. Report titles, headings, and totals must have Account records of their own. With random accessing it is even more important to draw up your chart of accounts carefully before entering it on the computer. The accounts will be numbered sequentially; their logical order on the Account file, and hence on the financial reports, corresponds exactly with their physical order.

With sequential accessing, there is no way to insert new records between adjacent existing records. You can always write a program to move the records around in the Account file, opening up space for records you need to add. But beware — if you move records around, their account numbers change. Figures 6-A and 6-B illustrate this. Notice on Figure 6-A that we want to insert a new total account after account 175 Brochure Printing and Mailing. To do this, we must first move all accounts from 176 Outside Prep. Work on Ads onward down one space in the file. Figure 6-B shows the new record in place, with account number 176. Notice how all the accounts we moved down in the file have a new account number.

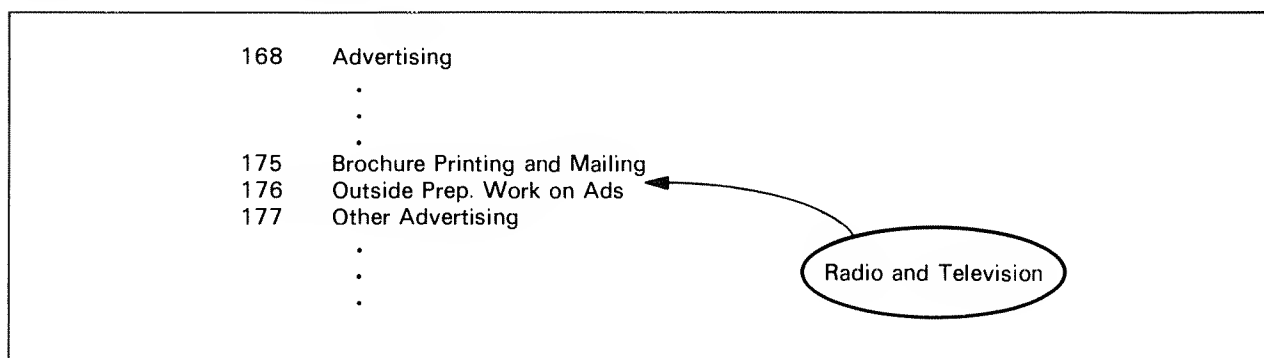


Figure 6-A. A New Account to Insert

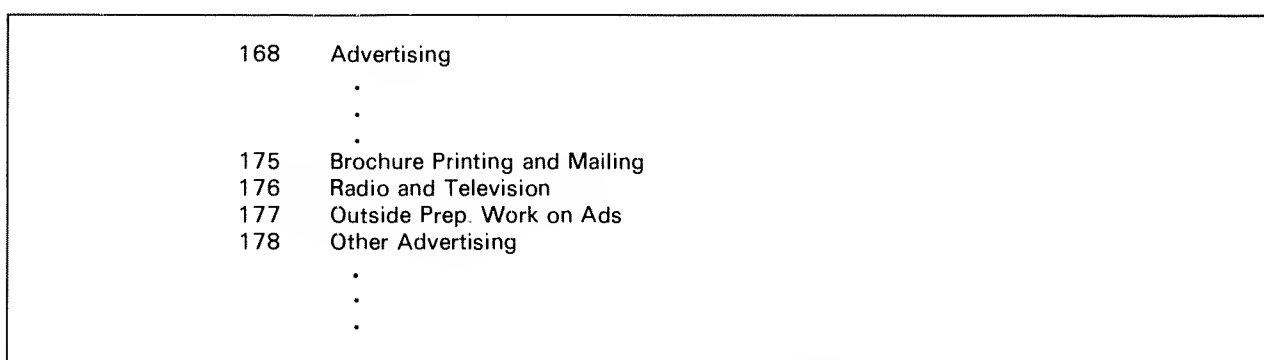


Figure 6-B. A New Account Inserted

ADDITIONAL SOURCES OF EXTERNAL POSTINGS

The General Ledger programs accept postings to any account from outside programs via the External Posting file. The programs in the Osborne & Associates publication *Accounts Payable and Accounts Receivable* use this file. Other application programs can make postings as well. Thus your Payroll, Order Entry, Inventory, Cash Receipts, and other programs can automatically update the General Ledger accounts.

Before you can prepare your program to make General Ledger postings, you must become familiar with the External Posting file layout on page 7. The External Posting file is blocked 16 records per sector on the Wang computer, which is a hard-sectored system. You may not have to worry about sector boundaries and record blocking on your computer. But if you do, be sure your application program correctly blocks records on the External Posting file. Furthermore, your program must put a 0 in the Account Number fields of all unused records in a sector.

Always add your postings to the end of the External Posting file, and always write an end-of-file marker following the last posting or block of postings.

The External Posting file layout lists the data items that your program must provide for each posting. They are the General Ledger account number, a code describing the source of the posting, the month and day the posting is made, a six-digit reference number, and the posting amount. The General Ledger presently recognizes four source codes: 0 for Payroll, 1 for Accounts Payable, 2 for Accounts Receivable, and 3 for General Ledger. The General Ledger Update program (G/L030) prints a summary of postings by source code for each account on the update report. The report format permits only four source codes. If you decide to add more source codes, you will have to modify the update report in G/L030.

COST DETAIL FROM POSTING RECORDS

You may want a detailed analysis of account activity over an extended period of time (i.e. more than one month on the update activity report). The very information you need goes by the board every month when the Update program (G/L030) erases the External Posting file. If you save the postings on a holding file during the Update program, they will be available when you want a long-term analysis. You will have to write a new program to sort the holding file by account number, date, etc., and to print a report based on the sort. Also, you must purge the holding file periodically so that it does not overflow with postings during some Update.

BUDGETING

The General Ledger has no provision for budgeting. You can add it. First you must establish some new Account record fields which will keep track of budget amounts for each account. There are three unused fields shown in the Account file layout (on page 6) which could be monthly, quarterly, and yearly budget amounts. The variables for these three fields are S(8), S(9), and S(10).

You will want to make occasional adjustments to these fields, so you should change the Account File Maintenance program (G/L010) to include them. Account File Maintenance is useful for making changes to account balances now and then, but is too cumbersome to use for entering a monthly budget amount for every account, and it provides no audit trail. Therefore, you should write a new program or series of programs to enter monthly, quarterly, or yearly budget amounts, update the Account file with these amounts, and print a report that details the activity.

Finally, you will need a new report to print a budget analysis. This report will probably include budget amounts, actual amounts, and perhaps the actual amount as a percent of budget. The report could be a replacement for the existing "special" report in G/L040. That way you could use the Special Report field on each Account record to control which accounts would print on the budget analysis report. The report could also be a new program.

DEPARTMENTALIZING

This General Ledger will support multiple departments, but only if you change the Account file contents and make some program changes. The easiest way to do this is to make the last digit of the account number be the department number. The Account file will have to be much larger since it must have enough room to hold one record for each department for each account that you departmentalize. Each Account record must identify which department it belongs to. Figures 6-C and 6-D illustrate this effect using part of the sample chart of accounts from Table 3-C. Figure 6-C shows part of the chart of accounts before departmentalization; Figure 6-D shows the same part of the chart of accounts after departmentalization.

| | |
|------------|-----------------------------------|
| 43200.0/50 | Materials and Supplies |
| 43210.0/00 | Computer Materials and Supplies |
| 43220.0/00 | Raw Materials and Supplies |
| 43230.0/00 | Stationery Materials and Supplies |
| 43290.0/00 | Other Materials and Supplies |
| 43299.0/50 | Total |

Figure 6-C. Accounts Without Departmentalization

| | |
|------------|--|
| 43200.0/50 | Materials and Supplies |
| 43210.0/00 | Computer Materials and Supplies - General |
| 43210.1/00 | Computer Materials and Supplies - Department 1 |
| 43210.2/00 | Computer Materials and Supplies - Department 2 |
| 43220.0/00 | Raw Materials and Supplies - General |
| 43220.1/00 | Raw Materials and Supplies - Department 1 |
| 43220.2/00 | Raw Materials and Supplies - Department 2 |
| 43230.0/00 | Stationery Materials and Supplies - General |
| 43230.1/00 | Stationery Materials and Supplies - Department 1 |
| 43230.2/00 | Stationery Materials and Supplies - Department 2 |
| 43290.0/00 | Other Materials and Supplies - General |
| 43290.1/00 | Other Materials and Supplies - Department 1 |
| 43290.2/00 | Other Materials and Supplies - Department 2 |
| 43299.0/50 | Totals |

Figure 6-D. Accounts With Departmentalization

Using this scheme to identify an account's department number limits program changes to the Reports program (G/L040). By making a few changes to this program, you can get separate financial reports for each department. The program must ask the operator for the department to report. Then as it goes through the Account file sequentially generating the report, it must bypass records for accounts that are not in the specified department, except that it should include all title, heading, and total records. The changes shown below for G/L040 will departmentalize the financial reports. You will also need to change the CRT mask 3 as shown on page 96.

```

new line:
6070 GOSUB'34(605,1,0,9)
:D=X0

change line 6240:
6240 GOSUB'110(2)
IF L3>0 THEN 6245
IF D=0 THEN 6245
IF D<>(L1-INT(L1))*10 THEN 6220
6245 IF R=2 THEN 6250
IF L4<>S THEN 6660

```

MASK 3

| MASK 3 | | 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 0 | 0 | G/L REPORTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 64 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 128 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 192 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 256 | 4 | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

ADD

Chapter Seven

FILE AND PROGRAM INITIALIZATION

This chapter lists the data files you must initialize and specifies what data you must put in them before you can begin regular processing. It also includes operating instructions for a stand-alone utility program that you can use to set up and subsequently modify CRT masks. In addition, you will find descriptions of standard subroutines that are used throughout the General Ledger programs.

DATA FILE INITIALIZATION

You must reserve space for the Account, External Posting, Direct Posting, General Information, and CRT Mask files on the disk in order to run the General Ledger programs. In addition, you must initialize each file. The following paragraphs describe each file's requirements

The Account file must have room for one record for each regular General Ledger account, each financial report title, each financial report heading, and each financial report total. There must also be a special record for totals of the sales accounts. This is all explained in more detail in the "Setting Up the Chart of Accounts" section in Chapter 3.

The External Posting file must have room enough to store all the postings from external sources (e.g., Accounts Payable) that will occur in one month. If this is not possible, you will have to run the General Ledger Update program as the file becomes full. Initialize this file by writing an end-of-file marker at the beginning of the file.

The Direct Posting file must have enough room to hold as many postings as you will enter from the Direct Entry program (not from an external source) in one month. If this is not possible, you will have to run the General Ledger Update program more than once a month. Initialize this file by writing an end-of-file marker at the beginning of the file.

The General Information file must have at least two records, and may have as many as eleven. The General Ledger program will only use two records. However, this file is compatible with the General Information file in the Osborne & Associates books *Payroll With Cost Accounting* and *Accounts Payable and Accounts Receivable*. General Ledger's General Information file has one more field than the file in the other books, the Fiscal Year Ends field. The changes necessary to adapt the Payroll, Accounts Payable, and Accounts Receivable programs to use General Ledger's General Information file are discussed later in this chapter. Initialize every field of each record in the General Information file to zero, then use the General Information File Maintenance program to fill in the real data.

The CRT Mask file must have room for six records. When you first define this file, place an end-of-file record at the beginning of the file. Then enter the masks using the CRT Mask File Maintenance program. The CRT layouts at the end of this chapter show the exact positioning of text on the masks.

COMMON SUBROUTINES

There are a number of subroutines that are commonly used throughout the General Ledger programs. The common subroutines each program uses are not included in its listing in Chapter 8. Instead, the common subroutines are listed together in one place in Chapter 8 as program G/L SUBS. This means as you enter each program into your computer, you must include the subroutines it needs from the G/L SUBS program listing.

Table 7-A lists the subroutines, the lines they occupy, and brief descriptions of each one's purpose. Table 7-B shows which subroutines each of the General Ledger programs uses. Note that whenever a program uses a special version of a common subroutine, that special version is included with the program listing; do not replace it with the standard version from G/L SUBS. You can use the two tables to determine which program lines from G/L SUBS each General Ledger program will need. For example, Table 7-B shows that program G/L030 uses common subroutines '40, '72, '42, '41, '60,

'130, '132, '139, '110, '111, and '112. It also uses a special version of subroutine '113, but the listing for this special version is included in the listing for G/L030. Turning to Table 7-A, we can list the line numbers each of the common subroutines uses:

| | |
|-------------------|----------------------|
| '40 lines 690-695 | '130 lines 2000-2110 |
| '72 lines 691-695 | '132 lines 2010-2110 |
| '42 lines 700-705 | '139 lines 2030-2110 |
| '41 lines 820-840 | '110 lines 3500-3510 |
| '60 line 1000 | '111 line 3550 |
| | '112 lines 3600-3630 |

Consolidating these line numbers, we see that program G/L030 needs the common subroutines on lines 690-705, 820-840, 1000, 2000-2110, and 3500-3630.

The more complex common subroutines are described in greater detail below. Seven of these subroutines are used to access the Account file by key. Keyed file accessing, as described in Chapter 2, is a way of locating specific data records by looking up the unique, identifying field of data (the key) in an index that cross references the key with the actual record location. Subroutines '130 through '139 inquire into and manipulate the index of keys. These subroutines, nominally located between lines 2000 and 2110, all transfer program control immediately to lines between 100 and 199.

Program lines 100 through 199, which perform the actual keyed accessing, are not furnished with this book. If you own a Wang computer, you can use their KFAM-3 keyed accessing subroutines, modules KFAM0003 and KFAM0103. You must modify both modules slightly to work with the General Ledger programs, as follows:

- 1) Change COM statements to DIM statements (Remove non-array numeric variables from COM statements.)
- 2) Renumber to start at line 100 and end by line 199 (line 101 must have only a RETURN statement on it).
- 3) Add these two lines:
1 GOTO 6000
6000 LOAD DC T P\$ 6000

KFAM0003 and KFAM0103 only locate desired records; data transfer is accomplished in the main General Ledger programs. KFAM0003 and KFAM0103 determine the location of a desired record and position the disk in preparation for the next DATA LOAD or DATA SAVE statement. All simple and array variables beginning with the letters Q, T, and V, both numeric and alphanumeric, are reserved for these program modules.

If you do not have a Wang computer, you will have to convert the General Ledger programs to use your computer's keyed file accessing (also called indexed sequential accessing). Alternatively, Chapter 6 describes a way to use random accessing on the Account file.

Here is an explanation of the more complex subroutines:

'32(A1) -- Position the CRT to location A1. The CRT has 1024 different locations, numbered from 0 to 1023. The first line contains locations 0-63, the second line has locations 64-127, and so on.

'34(X1,X2,X3,X4) -- Input alphanumeric data. The data is input at CRT location X1. X2 specifies the maximum number of characters that may be input, including sign and decimal point for numeric entry. If X4 is zero, alphanumeric input is specified and X0\$ returns the entered value. When numeric entry is indicated (X4 non-zero), entered values must be greater than or equal to X3 and less than or equal to X4. Numeric entry is returned in X0. All entry is terminated by pressing the RETURN key. Pressing the BACKSPACE key erases and allows re-entry of the last entered character. Pressing the LINE ERASE key erases and restarts the current entry. If SFK15 is pressed, program execution transfers to the Menu.

'35(X2\$) -- Flash the error bulletin X2\$ on the fourth line of the CRT.

'36(A2) -- Without erasing existing characters, advance the CRT cursor A2 spaces (i.e., move it to the right)

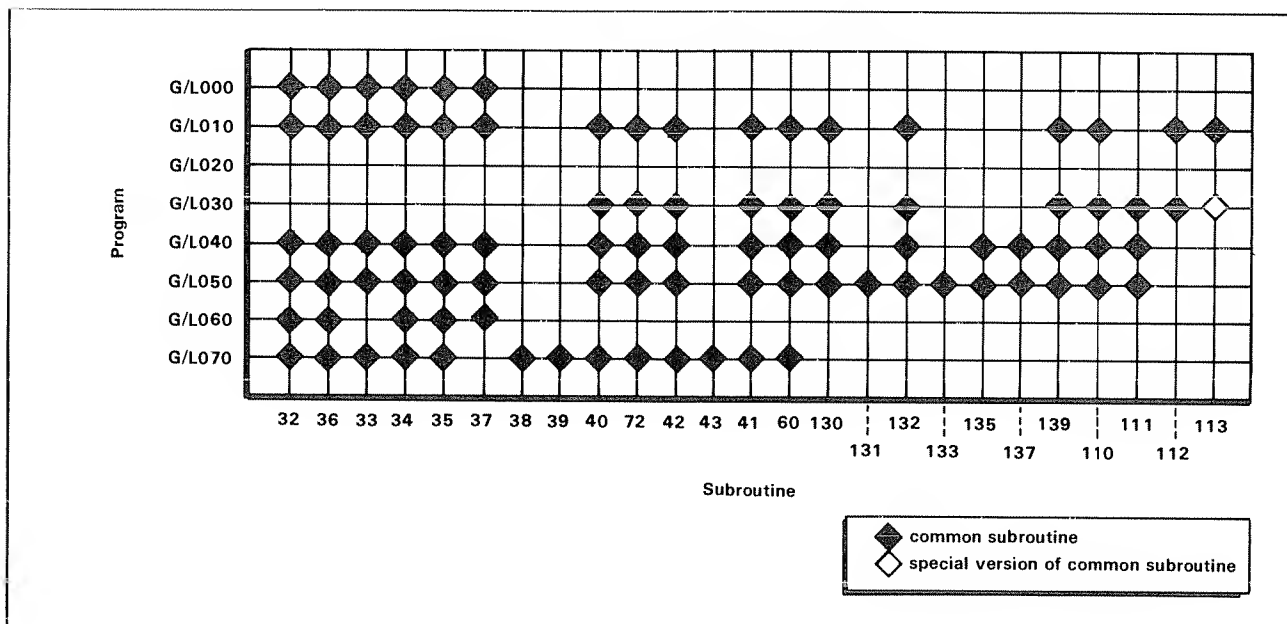
Table 7-A. Summary of Common Subroutines

| Number | Lines | Purpose |
|-----------------------|-------------|-------------------------------------|
| 32(A1) | 200 - 215 | CRT Cursor Position |
| 33(A1) | 240 - 260 | CRT Mask Load/Display |
| 34(X1,X2,X3,X4) | 310 - 525 | Input Data at Location X1 |
| 35(X2\$) | 615 | Display Error Bulletin |
| 36(A2) | 215 | Non-erasing Horizontal Tab (CRT) |
| 37(X2,X3,X4,X4\$) | 660 - 665 | Input with Prompt Message |
| 38(A4) | 670 - 675 | Input Date at Location A4 |
| 39(A1,X0\$) | 680 - 695 | Display Packed Date at Location A1 |
| 40(X0\$) | 690 - 695 | Print Packed Date |
| 41(X4\$,A1) | 820 - 840 | Print Report Headings as Needed |
| 42(A1) | 700 - 705 | Load and Unpack Company A1 |
| 43(A1) | 720 | Pack, Save Company A1 |
| 46(A1,X0) | 760 - 770 | Display Phone Number at Location A1 |
| 47(X0) | 770 | Print Phone Number |
| 60 | 1000 | Check for Printer Ready |
| 72(X0) | 691 - 695 | Print Numeric Date |
| 110(A1) | 3500 - 3510 | Load, Unpack Account Record |
| 111(A1) | 3550 | Pack, Save Account Record |
| 112(A1) | 3600 - 3630 | Load, Unpack Posting Record |
| 113(A1) | 3650 - 3680 | Pack, Save Posting Record |
| 130(T6,T7,Q2,Q3,V7\$) | 2000 - 2110 | Open File for Keyed Accessing |
| 131(T6,T1\$) | 2005 - 2110 | Delete Record from Keyed File |
| 132(T6,T1\$) | 2010 - 2110 | Find Record in Keyed File |
| 133(T6,T1\$) | 2015 - 2110 | Add Record to Keyed File |
| 135(T6) | 2020 - 2110 | Find First Record in Keyed File |
| 137(T6) | 2025 - 2110 | Find Next Record in Keyed File |
| 139(T6) | 2030 - 2110 | Close File for Keyed Accessing |

- '37(X2,X3,X4,X4\$)** -- Display operator prompt message X4\$ on the second line of the CRT. Input numeric or alphanumeric data on the third line of the CRT. Except for the input location, the description of subroutine '34 applies to this subroutine also.
- '38(A4)** -- Use subroutine '34 to input a six-digit date at CRT location A4. The first two digits are the month number (must be between 1 and 12), the next two digits are the day number (must be between 1 and 31), and the last two digits are the year number. The entered date is returned as a numeric value in X0 and as a packed numeric value in X3\$. The entered date is redisplayed with slashes separating the month and day, and day and year.
- '39(A1,X0\$)** -- Display, at CRT location A1, the date packed in X0\$. Separate month and day, and day and year with slashes.
- '40(X0\$)** -- Print the date packed in X0\$. Separate the month and day, and day and year with slashes.
- '41(X4\$,A1)** -- Check the line counter to see if the current report page has been filled. If so, advance to the next page, increment the page counter, print the report headings, and reset the line counter. X4\$ is the report title. A1 is the report width, in columns.
- '42(A1)** -- Load and unpack the system General Information record. If A1 is not zero, load and unpack the General Information record for company number A1.
- '43(A1)** -- Pack and save the system General Information record. If A1 is not zero, pack and save the General Information record for company number A1.
- '72(X0)** -- Print or display numeric date X0, with slashes separating month and day, and day and year.
- '130(T6,T7,Q2,Q3,V7\$)** -- Performs a DATA LOAD DC OPEN for data file V7\$ and its companion index file. T6 is a file identification number (must be between 1 and 3) that is associated with the newly opened data file and is used to reference that data file in subsequent calls to keyed accessing subroutines. T7 is the logical file number assigned to the index file. Q2 is the logical file number assigned to the data file. Q3 must always receive the value 1. This subroutine must be executed for each data file that is to be key accessed before any of the other keyed accessing subroutines can be used. Upon return, status variable Q\$ can either be blank (subroutine executed OK) or X (one of the parameters passed was incorrect).

- '131(T6,T1\$)** -- Deletes key T1\$ from the index for file T6. Locates the data record for key T1\$ in data file T6, but does not alter that data record, nor remove it from the file. Deleting the key from the index file effectively prevents further accessing of its associated data record. Upon return, status variable Q\$ can be blank (subroutine executed OK), N (key T1\$ is not in index) or X (improper parameters).
- '132(T6,T1\$)** -- Locates the data record for key T1\$ on data file T6. If the key cannot be found, the file's current sector address is set to the location of the record with the key that immediately precedes the position key T1\$ would occupy, were it in the index. Upon return, status variable Q\$ can be blank (subroutine executed OK), N (key T1\$ is not in index) or X (improper parameters).
- '133(T6,T1\$)** -- Key T1\$ is added to the index for file T6. The file's current sector address is set to the next available location on the data file. Upon return, status variable Q\$ can be blank (subroutine executed OK), D (T1\$ duplicates a key already in the index), S (no more room available either in the data file or the index for more records or keys) or X (improper parameters).
- '135(T6)** -- Locates the record with the lowest key in the index for file T6. Upon return, status variable Q\$ can be blank (subroutine executed OK), N (no records on file) or X (improper parameters).
- '137(T6)** -- Locates the record with the key that sequentially follows the last record accessed on file T6. This subroutine must not be the first keyed accessing subroutine executed after opening file T6 (by executing subroutine '130). This subroutine has unpredictable results if it is the first keyed accessing subroutine executed following a keyed accessing subroutine that returned a non-blank (error condition) status code for file T6. It will work properly following subroutine '132 with a return code of N (key not in index), though. Upon return, status variable Q\$ can be blank (subroutine executed OK), E (end-of-file, the last record accessed had the highest key in the index) or X (improper parameters).
- '139 (T6)** -- Closes currently opened file T6 and its companion index file. File identifier T6 and logical file numbers T7 and Q2 (assigned in subroutine '130) are then available for reuse. Following execution of this subroutine, T6 cannot be used to reference the data file opened against it in subroutine '130. Upon return, status variable Q\$ can be blank (subroutine executed OK) or X (improper parameters).

Table 7-B. Common Subroutine Usage



FILE REORGANIZE

The Account File Reorganize program (G/L060) is designed to use Wang Laboratories' KFAM file reorganize sub-system. Wang's Integrated Support System (ISS) manual describes the sub-system in detail. The sub-system includes ISS program modules KFAM3503, KFAM3603, KFAM3703, and KFAM0103. In order to use this sub-system with the General Ledger programs, you must rename KFAM0103 to KFAM3803 (i.e. program KFAM0103 must exist on your disk as KFAM3803). Also, you must change line 3072 of KFAM3503 to:

3072 LOAD DC T #0, "KFAM3803" 3072,3072

COORDINATING WITH PAYROLL, ACCOUNTS PAYABLE, AND ACCOUNTS RECEIVABLE

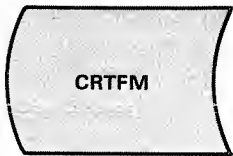
The General Information file (G/I0F010) in this book is the same as the General Information file in the *Payroll With Cost Accounting and Accounts Payable and Accounts Receivable* books, except that this General Information file has an additional field, the Fiscal Year Ends field. Payroll, Accounts Payable, and Accounts Receivable can use this General Information file, but you must replace their General Information File Maintenance programs (P/R010 and A/P110) with program G/L070. You must also use common subroutines '42 and '43 from G/L SUBS in all Payroll, Accounts Payable, and Accounts Receivable programs that use them (refer to Table 7-G in the *Payroll With Cost Accounting* and *Accounts Payable and Accounts Receivable* books).

As discussed in other chapters of this book, **General Ledger will accept postings to any account from external sources. The Accounts Payable and Accounts Receivable programs in the Osborne & Associates book *Accounts Payable and Accounts Receivable* are specifically designed to interface with the General Ledger programs.** For this interface to work, you must set up your disks so that the Account file (G/L0F110) and the External Posting file (G/L0F020) are on-line whenever the Accounts Payable Transaction Entry, Accounts Payable Update, Accounts Payable Check Calculate, Accounts Payable Transaction File Maintenance, and Accounts Receivable Update programs are running. These files must also be on-line when the General Ledger programs are running, of course.

To activate the link between General Ledger and Accounts Payable and Accounts Receivable, you must replace subroutine '113 on lines 3650-3660 in programs A/P030, A/P040, and A/R030 with subroutine '113 on lines 3650-3680 from G/L SUBS in this book. You must also delete some Accounts Payable and Accounts Receivable program lines as follows:

- Program A/P010, delete lines 5415, 6055, 6403.
- Program A/P030, delete line 6025.
- Program A/P040, delete line 6025
- Program A/P120, delete lines 5415, 6055, 6403
- Program A/R030, delete line 6010.

CRT MASK FILE MAINTENANCE PROGRAM (CRTFM) OPERATING INSTRUCTIONS



PROGRAM: CRT Mask File Maintenance
PURPOSE: Add, inspect, modify, or print CRT Masks.
WHEN: At setup time or as needed.
TO EXIT: Enter an operation code of 0, or SFK15.

Load and execute the CRTFM program.

ENTER IF FILE IS ON (F)IXED OR (R)EMOVABLE

1) Select file location (F,R).

- F** - CRT Mask file is on the fixed disk (disk address 310) Proceed to step 2
- R** - CRT Mask file is on the removable disk (disk address B10) Proceed to step 2

ENTER NAME OF FILE

2) Enter the name of the CRT mask file.

The standard name for the General Ledger CRT Mask file is CRT3.
If the file is located, proceed to step 3
If the file is not located, an error will result Start the program over

CRT 7-C

```
CRT MASK FILE MAINTENANCE
ENTER OPERATION CODE
?_
<bulletin>
(0)END
(1)INQUIRE
(2)CHANGE-ADD-REPLACE
(3)PRINT
```

SELECT OPERATION

The display appears as CRT 7-C.

3) Enter operation code (0-3).

- 0 - **END.** You must enter '0'; you cannot simply enter RETURN. The program ends.
- 1 - **INQUIRE.** Inspect current contents of any or all CRT Mask records. Proceed to step 4.
- 2 - **CHANGE-ADD-REPLACE.** Modify the current contents of any CRT Mask record. Proceed to step 5.
- 3 - **PRINT.** Print (on a line printer) CRT Mask records. Proceed to step 9.

CRT 7-D

```
CRT MASK FILE INQUIRY
ENTER FIRST MASK NUMBER
?_
<bulletin>
```

OPERATION IS INQUIRE

The display appears as CRT 7-D.

4) Enter mask number (0-n).

0 - The first mask on file is displayed (mask 1)

n - Display the mask at this record location on the file.

If this number is greater than the number of records on file, a new operation is requested; return to step 3

Otherwise, the requested mask is displayed. You then have two options:

[RETURN] - You can see the next sequential mask on the file by pressing the RETURN key. Continue pressing [RETURN] until you have seen all you want, then press [E]. Or, if you key [RETURN] until there are no more records to be seen, the program automatically requests a new operation; return to step 3

[E] - Press the [E] key to end the INQUIRE operation. Do not press [RETURN] after [E]. A new operation is requested; return to step 3

CRT 7-E

```
CRT MASK FILE CHANGE-ADD-REPLACE  
ENTER MASK NUMBER TO CHANGE (OR NEW)  
?_  
<bulletin>
```

OPERATION IS CHANGE-ADD-REPLACE

The display appears as CRT 7-E.

5) Enter mask number (1-999, NEW).

1-999 - Request to change the contents of the mask at this record location on the file

If this number is greater than the number of records on file, a new mask number is requested, repeat this step

Otherwise, you may continue the requested operation, proceed to step 6

NEW - **Create a new mask.** It will be recorded at the next record location on the file. After this step, a new mask is entered as "changes"; proceed to step 6

Specify Location to Start Changes

LINE OR COMPOUND POSITION TO START CHANGES

6) Enter line number (0-15) or compound position (16-1023).

0-15 - Row number in which to start changes. A column number is also requested; proceed to step 7

16-1023 - Request to start changes at this space location on the display. A compound location is found by numbering each space on the mask, the first line containing spaces 0-63, the second line spaces 64-127, and so on. Enter mask changes, proceed to step 8

ENTER COLUMN NUMBER

7) Enter column number (0-63).

Request to start changes at the row and column specified. Enter mask changes; proceed to step 8.

8) Change/create a mask.

The cursor will move to the location you have specified. Change the displayed text by typing new characters directly over the old ones. There are several keys that perform special editing functions during the text replacement process:

RETURN - If you press this key on the last line, changes to the current mask end and you are asked for another mask number to change, return to step 5. Otherwise, the cursor moves to the first column on the next line and you can continue changes there.

PI (π) - Changes to this mask end. If the mask is NEW, it is saved at the next location on the file. Otherwise, this mask replaces the mask previously at the record location selected to change. You are asked for another mask number to change; return to step 5.

BACKSPACE - Each time you press this key, the cursor moves one space to the left without erasing any characters. Pressing this key when the cursor is at the first position on any line has no effect.

PRINT - Without erasing any existing characters, the cursor moves one space to the right. If you press this key at the end of a line, the cursor moves to the first column on the next line.

COS(- The cursor stays in the same column but moves one line down. If you press this key on the last line, changes to this mask end and you are asked for another mask number to change.

SIN(- The cursor stays in the same column but moves one line up. Pressing this key when the cursor is on the first line has no effect.

CRT 7-F

```
CRT MASK FILE PRINT
ENTER FIRST MASK NUMBER (0 IF NONE)
?_
<bulletin>
```

OPERATION IS PRINT

The display appears as CRT 7-F.

9) Enter first mask number (0-999, SFK14).

0 - End the PRINT operation. You must enter the character '0'; simply pressing [RETURN] will not perform this function here. A new operation is requested; return to step 3.

1-999 - Begin printing mask templates with this mask record number. Proceed to step 10

SFK14 - End the PRINT operation. A new operation is requested; return to step 3

ENTER LAST MASK NUMBER

10) Enter mask number (first mask number - 999, SFK14).

Mask number - End printing with this mask number. The selected masks will be printed. Make sure your printer is turned on and ready to print. When printing is completed, a new mask print range is requested; return to step 9.

SFK14 - End the PRINT operation. (If the actual printing of the mask is in process when SFK14 is pressed, the printing will stop and SFK14 will become effective immediately thereafter.) A new operation is requested; return to step 3

CRT MASK LAYOUTS

The following pages illustrate these CRT mask layouts:

1. Menu
2. G/L Direct Posting Entry/Print
3. G/L Reports
4. G/L Account File Maintenance
5. General Information File Maintenance

Use the utility program CRTFM (instructions provided on page 102) to initialize these masks.

| MASK I | | 0 | | | | | | | | | | 1 | | | | | | | | | | 2 | | | | | | | | | | 3 | | | | | | | | | | 4 | | | | | | | | | | 5 | | | | | | | | | |
|--------|----|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 0 | 0 | G/L PROGRAM SELECTION MENU | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 64 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 128 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 192 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 256 | 4 | 1) GENERAL INFORMATION F/M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 320 | 5 | 2) DIRECT POSTING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 384 | 6 | 3) POSTING UPDATE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 448 | 7 | 4) REPORTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 512 | 8 | 5) ACCOUNT FILE MAINTENANCE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 576 | 9 | 6) ACCOUNT FILE REORGANIZE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 640 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 704 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 768 | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 832 | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 896 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 960 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| MASK 2 | | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|--------|----|-----------------------|-------------|---------------|-----------------------|---------------|---------------|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 0 | G/L | O I R E C T | P O S T I N G | E N T R Y / P R I N T | | | |
| 64 | 1 | | | | | | | |
| 128 | 2 | | | | | | | |
| 192 | 3 | | | | | | | |
| 256 | 4 | A C C O U N T | | | | | | |
| 320 | 5 | 1) O A T E | | | | | | |
| 384 | 6 | 2) R E F E R E N C E | | | | O P E N I N G | B A L A N C E | |
| 448 | 7 | 3) A M O U N T | | | | C L O S I N G | B A L A N C E | |
| 512 | 8 | | | | | | | |
| 576 | 9 | | | | | | | |
| 640 | 10 | | | | | | | |
| 704 | 11 | | | | | | | |
| 768 | 12 | | | | | | | |
| 832 | 13 | | | | | | | |
| 896 | 14 | | | | | | | |
| 960 | 15 | | | | | | | |

| MASK 3 | | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|--------|----|-----|-----------------------|-------------|---|-------------------|-----------------|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 0 | G/L | R E P O R T S | | | | | |
| 64 | 1 | | | | | | | |
| 128 | 2 | | | | | | | |
| 192 | 3 | | | | | | | |
| 256 | 4 | + | + | + | + | + | + | + |
| 320 | 5 | + | T Y P E | | + | F O R M A T | | + |
| 384 | 6 | + | O = E X I T | | + | I = I N C O M E | S T M T | + |
| 448 | 7 | + | I = T R I A L | | + | 2 = B A L A N C E | | + |
| 512 | 8 | + | 2 = S P E C I A L | | + | 2 = 2 N O | P R E V I O U S | + |
| 576 | 9 | + | 3 = M O N T H L Y | | + | 3 = 3 R O | P R E V I O U S | + |
| 640 | 10 | + | 4 = Q U A R T E R L Y | | + | | | + |
| 704 | 11 | + | 5 = M O V E | T O T A L S | + | | | + |
| 768 | 12 | + | + | + | + | + | + | + |
| 832 | 13 | | | | | | | |
| 896 | 14 | | | | | | | |
| 960 | 15 | | | | | | | |

| MASK A | | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|--------|----|------------------|---------|------|-------------|-----------------|---|---|
| 0 | 0 | G/L | ACCOUNT | FILE | MAINTENANCE | | | |
| 64 | 1 | | | | | | | |
| 128 | 2 | | | | | | | |
| 192 | 3 | | | | | | | |
| 256 | 4 | ACCOUNT | | / | | 9)THIS MONTH | | |
| 320 | 5 | 1)NAME | | | | 10)THIS YEAR | | |
| 384 | 6 | 2)ACCOUNT TYPE | | | | 11)THIS QTR | | |
| 448 | 7 | 3)REPORT TYPE | | | | 12)1ST PREV QTR | | |
| 512 | 8 | 4)NORMAL BALANCE | | | | 13)2ND PREV QTR | | |
| 576 | 9 | 5)TOTAL LEVEL | | | | 14)3RD PREV QTR | | |
| 640 | 10 | 6)EXTRA LINE ADV | | | | 15)LAST YEAR | | |
| 704 | 11 | 7)SALES ACCOUNT | | | | | | |
| 768 | 12 | 8)SPECIAL REPORT | | | | | | |
| 832 | 13 | | | | | | | |
| 896 | 14 | | | | | | | |
| 960 | 15 | | | | | | | |

[illegible]

Chapter Eight

PROGRAM LISTINGS

This chapter contains the complete program listings for General Ledger. Each program listing has four parts. The first part contains the actual program lines. The second part lists the line numbers that are referenced somewhere in the program by various BASIC statements (GOTO, GOSUB, PRINTUSING, etc.), and the numbers of the referencing lines. The third part lists the variables that are referenced and the numbers of the referencing lines. The fourth part lists references to marked subroutines (i.e., defined by DEFFN' statements) and the numbers of the referencing lines.

There are several BASIC statements on most of the program lines. If your computer does not allow multiple statement lines, you will have to assign line numbers to the statements that fall between the existing line numbers. To facilitate this, and to improve readability, **the programs are listed with only one statement on each printed line.** Each line number is printed at the left margin and is followed by the first statement on that program line. Additional program statements from the same program line are then printed, one to a printed line, each preceded by a colon.

If you have to assign line numbers to every statement, you will discover that there are often more statements between already-defined line numbers than there are unused line numbers between those defined line numbers. This means you will have to renumber some of the existing program line numbers. If you do this, be sure to also change any GOTO's, GOSUB's, etc. that reference the line numbers you are changing. Use the line number cross reference part of each program listing to assist in this task.

Instead of imbedding program remarks (or comments) in the program listings themselves, we have placed them alongside the listings with a pointer to the statement(s) they pertain to. We have used the same technique to define the variables in the variable cross reference. To save space, we use the following abbreviations throughout the remarks:

- P/R - Payroll
- A/P - Accounts Payable
- A/R - Accounts Receivable
- G/L - General Ledger
- G/I - General Information

G/L000 Menu

| | PROGRAM LISTING | G/L000 | PAGE 1 |
|--|---|--------|--------|
| Main program begins on line 6100 | 1 GOTO 6100 5 REM G/L000 PROGRAM SELECTION MENU 1/79 6 COM P#8 101 RETURN | | |
| Data table contains parameter pairs, one for each program: program file name and keyed file accessing subroutines requirement (0 = none, 1 = full set, 2 = inquiry only) | 5000 DATA "G/L070",0,"G/L010",2,"G/L020",2,"G/L040",2,"G/L050",1,"G/L060",0 6000 LOAD DC T P# 6000 6100 SELECT DISK 310,#1310,#2310,#3310,#4310,#5310,#6310 :GOSUB '33(1) :IF P#<." " THEN 6105 :GOSUB '37(4,0,0,"ENTER PASSWORD") :IF X0#="PASS" THEN 6105 :GOSUB '35("WRONG PASSWORD") :GOTO 6100 | | |
| Final step Load and run selected program | 6105 GOSUB '37(2,1,6,"CHOOSE PROGRAM BY NUMBER") :IF X0=21 THEN 6400 :RESTORE X0#2-1 :PRINT :PRINT HEX(010A0A0A);"-->LOADING PROGRAM";X0;TAB(63) :READ P#,X0 :ON X0 GOTO 6120 ,6130 :LOAD DC T P# 6110 DEFFN'15 :LOAD DC T"G/L000" 6120 LOAD DC T"KFAM0003" 1 ,5999 6130 LOAD DC T"KFAM0103" 1 ,5999 6400 PRINT HEX(03) :END | | |
| Load keyed file accessing subroutines (automatically deleting lines 1 - 5999) Continue at line 6000 after loading | | | |

G/L000

| LINE NUMBER | CROSS REFERENCE | G/L000 | PAGE 1 |
|-------------|-----------------|--------|--------|
| 0001 - | 6120 6130 | | |
| 5999 - | 6120 6130 | | |
| 6000 - | 6000 | | |
| 6100 - | 0001 6100 | | |
| 6105 - | 6100 6100 | | |
| 6120 - | 6105 | | |
| 6130 - | 6105 | | |
| 6400 - | 6105 | | |

G/L000

| | VARIABLE CROSS REFERENCE | G/L000 | PAGE 2 |
|------------------------------|-------------------------------|--------|--------|
| Name of program file to load | P# - 0006 6100 6105 | | |
| Miscellaneous temporary | X0 - 6105 6105 6105 6105 6105 | | |
| Password entered by operator | X0# - 6100 | | |

G/L000

| SPECIAL FUNCTION CROSS REFERENCE | G/L000 | PAGE 3 |
|----------------------------------|-----------|--------|
| ' 15 - | 6110 | |
| ' 33 - | 6100 | |
| ' 35 - | 6100 | |
| ' 37 - | 6100 6105 | |

G/L010 Direct Posting Entry

| | PROGRAM LISTING | G/L010 | PAGE 1 |
|--|--|--------|--------|
| Main program begins on line 6000 | 1 GOTO 6000 | | |
| Save last (partial) block of postings, if any | 5 REM G/L010 DIRECT POSTING ENTRY/PRINT 1/79 4000 DEFFN 'B3 :IF G8=1 THEN 101 :G8=17 :GOSUB '113(3) :G8=0 :RETURN | | |
| Stop program if too few sectors (X0) are left on the Direct Posting file | 4020 DEFFN 'B4(X0) :IF X0>1 THEN 101 :PRINT HEX(010A0A);"FILE FULL - RUN G/L UPDATE" :PRINT "KEY <CONTINUE> <RETURN> TO EXIT" :STOP | | |
| Enter month and day for Posting Date field | :GOTO 6340 5000 UNPACK(##,##)G3\$ TO P3 :GOSUB '32(335) :PRINT TAB(5); :GOSUB '34(336,4,0,9999) :IF X0=0 THEN 5040 :P3=X0/100 :A1=INT(X0/100) :IF A1<1 THEN 5020 :IF A1>12 THEN 5020 :A1=X0-A1*100 :IF A1<1 THEN 5020 :IF A1>32 THEN 5040 5020 GOSUB '35("BAD DATE") :GOTO 5000 | | |
| Check for valid month | 5040 CONVERT P3*100 TO >0\$, (####) :GOSUB '32(335) :PRINT STP(X0\$,1,2);"/";STR(X0\$,3,2); :RETURN | | |
| Check for valid day | 5060 GOSUB '34(398,6,0,999999) :P4=X0 :RETURN | | |
| Display month/day | 5080 GOSUB '34(457,11,-9999999.99,9999999.99) :P5=X0 :GOSUB '32(490) :PRINT USING S900 ,D(1)+P5 :RETURN | | |
| Enter Reference Number field | 5900 %-#####.## 5910 #####.## ## ##/## #####-#####.## 5920 ##### TOTAL DIRECT POSTINGS #####.## | | |
| Enter Posting Amount field | 6000 DATA LOAD DC OPEN T#4,"G/L0F020" :DATA LOAD DC OPEN T#3,"G/L0F030" :SKIP #4,END :LIMITS T#4,A,A,A1 :R9=A-A1 :SKIP #3,END :LIMITS T#3,A,A1,A2 :R8=A1-A2-1 :GOSUB '84(P8) :R9=R9-A2+A :GOSUB '84(R9) :G9=R8 :IF R8<R9 THEN 6020 :G9=R9 | | |
| Display new account balance | 6020 INIT(00)G\$() :GOSUB '130(1,1,2,1,"G/L0F110") :GOSUB '42(1) 6040 P2=3 :GOSUB '33(2) :GOSUB '37(1,0,2,"ENTER OPERATION (0=EXIT, 1=POST, 2=PRINT)") :ON X0+1 GOTO 6340 ,6060 ,6200 6060 GOSUB '34(264,7,0,99999.9) :P1=X0 :IF X0=0 THEN 6040 :PACK(#####.##)X0\$ FROM X0,0 :P1=X0 :GOSUB '132(1,X0\$) :IF Q\$=" " THEN 6080 :GOSUB '35("NOT ON FILE") :GOTO 6060 | | |
| Open Posting files, skip to end, compute current sizes | 6080 GOSUB '110(2) :UNPACK(##,##)G3\$ TO P3 :P4,P5=0 :GOSUB '32(272) :PRINT L1\$;TAB(31) :GOSUB 5040 :X0\$="INCOME STMT" :IF L4=1 THEN 6100 | | |
| Check for full Posting files The External Posting file must have room for all records currently in the Direct Posting file | | | |
| Clear Posting record variables Open Account file for keyed file accessing Retrieve G/L data | | | |
| Set Account Type field (P2) for direct postings Request operation code and branch to appropriate program area | | | |
| Enter direct postings Request Account Number field; make sure it's on the Account file | | | |
| Retrieve and display account data | | | |

G/L010

G/L010 Direct Posting Entry

PROGRAM LISTING

G/L010

PAGE 2

| | | |
|--|------|---|
| | | :X0\$="BALANCE SHEET" |
| | | 6100 GOSUB '36(8) |
| | | :PRINT X0\$; ", "; |
| | | :X0\$="DEBIT" |
| | | :IF L5=1 THEN 6120 |
| | | :X0\$="CREDIT" |
| | | 6120 PRINT X0\$; ", " |
| | | :GOSUB '36(43) |
| | | :PRINTUSING 5900 ,D(1) |
| Enter Reference and Amount fields | | :GOSUB 5060 |
| | | :GOSUB 5080 |
| Allow changes to entries | 6140 | GOSUB '37(1,0,4,"ENTER FIELD TO CHANGE (0=NONE; 4=CANCEL)") |
| | | :IF X0=0 THEN 6160 |
| | | :IF X0=4 THEN 6180 |
| | | :ON X0GOSUB 5000 ,5060 ,5080 |
| | | :GOTO 6140 |
| Save the posting If it filled the file, subroutine '84 will end the program | 6160 | GOSUB '113(3) |
| | | :GOSUB '35("RECORDED") |
| | | :GOSUB '84(69) |
| Cancel the posting | 6180 | GOSUB '33(2) |
| | | :GOTO 6060 |
| Print Save any postings just entered Reposition Direct Posting file | 6200 | GOSUB '83 |
| | | :DBACKSPACE #3,BEG |
| | | :G7=16 |
| | | :N,N1=0 |
| | | :H1=3 |
| | | :L=60 |
| Make sure printer is on; select printer for output | | :GOSUB '60 |
| | | :SELECT PRINT 215(132) |
| Retrieve next posting | 6220 | GOSUB '112(3) |
| | | :IF G7=16 THEN 6320 |
| | | :IF P1>0 THEN 6240 |
| End of file? | | :G7=16 |
| | | :GOTO 6220 |
| Skip over unused records at the end of the current block of postings | 6240 | H1=H1+1 |
| | | :IF H1<4 THEN 6260 |
| | | :PRINT |
| | | :L=L+1 |
| Three postings are printed per line See if this posting should start a new line or not | | :GOSUB '41("DIRECT GENERAL LEDGER POSTINGS",110) |
| | | :H1=1 |
| Print posting data | 6260 | PRINTUSING 5910 ,P1,P2,INT(P3),100*(P3-INT(P3)),P4,P5; |
| | | :IF H1=3 THEN 6280 |
| | | :PRINT " >-----"; |
| Accumulate posting totals | 6280 | N=N+1 |
| | | :N1=N1+P5 |
| Print totals | 6300 | GOTO 6220 |
| | 6320 | PRINT |
| | | :PRINT HEX(0A);TAB(35); |
| | | :PRINTUSING 5920 ,N,N1 |
| | | :GOTO 6040 |
| End program Encourage printing any postings that were just entered | 6340 | DEFFN'15 |
| | | :IF G8=1 THEN 6360 |
| | | :GOSUB '37(1,0,1,"DO YOU WANT A DIRECT POSTING LISTING?") |
| | | :IF X0=1 THEN 6200 |
| | | :GOSUB '83 |
| If report isn't printed, save last block of postings | 6360 | GOSUB '139(1) |
| | 6380 | DATA SAVE DC CLOSEALL |
| | | :PRINT HEX(03); "G/L DIRECT POSTING LOADING MENU" |
| | | :LOAD DC T"G/L000" |
| Close Account file for keyed file accessing Reload Menu | 6440 | DEFFN'25"A\$=";HEX(22); "G/L010";HEX(22); ":SCRATCHTAS";HEX(0D) |
| | 6460 | DEFFN'26"SAVEDCT(A\$)A\$";HEX(0D) |

G/L010

G/L010 Direct Posting Entry

LINE NUMBER CROSS REFERENCE G/L010

PAGE 1

0101 - 4000 4020
 5000 - 5020 6140
 5020 - 5000 5000 5000
 5040 - 5000 5000 6080
 5060 - 6120 6140
 5080 - 6120 6140
 5900 - 5080 6120
 5910 - 6260
 5920 - 6320
 6000 - 0001
 6020 - 6000
 6040 - 6060 6320
 6060 - 6040 6060 6180
 6080 - 6060
 6100 - 6080
 6120 - 6100
 6140 - 6140
 6160 - 6140
 6180 - 6140
 6200 - 6040 6340
 6220 - 6220 6300
 6240 - 6220
 6260 - 6240
 6280 - 6260
 6320 - 6220
 6340 - 4020 6040
 6360 - 6340

G / L 0 1 0

VARIABLE CROSS REFERENCE G/L010

PAGE 2

Miscellaneous, temporary A - 6000 6000 6000 6000 6000
 Miscellaneous, temporary A1 - 5000 5000 5000 5000 5000 5000 5000 6000 6000 6000 6000
 Miscellaneous, temporary A2 - 6000 6000 6000
 Account file D () - 5080 6120
 Posting file G\$ () - 6020
 G/I file G3\$ - 5000 6080
 Posting file blocking factor (loading) G7 - 6200 6220 6220
 Posting file blocking factor (saving) G8 - 4000 4000 4000 6340
 Sectors remaining on Posting file G9 - 6000 6000 6160
 Posting's position on printed line H1 - 6200 6240 6240 6240 6240 6260
 Line counter L - 6200 6240 6240
 Account name L1\$ - 6080
 Account's report type L4 - 6080
 Account's normal balance (DB or CR) L5 - 6100
 Number of postings printed N - 6200 6280 6280 6320
 Cumulative \$ amount of postings printed N1 - 6200 6280 6280 6320
 Posting account number P1 - 6060 6060 6220 6260
 Posting source code P2 - 6040 6260
 Posting date P3 - 5000 5000 5040 6080 6260 6260 6260
 Posting reference P4 - 5060 6080 6260
 Posting amount P5 - 5080 5080 6080 6260 6280
 Keyed file accessing status Q\$ - 6060
 Space available on Direct Posting file R8 - 6000 6000 6000 6000
 Space available on External Posting file R9 - 6000 6000 6000 6000 6000
 Miscellaneous, temporary X0 - 4020 4020 5000 5000 5000 5000 5060 5080 6040 6060 6060 6060
 6140 6140 6140 6340
 Miscellaneous, temporary X0\$ - 5040 5040 5040 6060 6060 6080 6080 6100 6100 6100 6120

G / L 0 1 0

SPECIAL FUNCTION CROSS REFERENCE G/L010

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' 15 - 6340
 ' 25 - 6440
 ' 26 - 6460
 ' 32 - 5000 5040 5080 6080
 ' 33 - 6040 6180
 ' 34 - 5000 5060 5080 6060
 ' 35 - 5020 6060 6160
 ' 36 - 6100 6120
 ' 37 - 6040 6140 6340
 ' 41 - 6240
 ' 42 - 6020
 ' 60 - 6200
 ' 83 - 4000 6200 6340
 ' 84 - 4020 6000 6000 6160
 ' 110 - 6080
 ' 112 - 6220
 ' 113 - 4000 6160
 ' 130 - 6020
 ' 132 - 6060
 ' 139 - 6360

G/L020 Sort Postings

PROGRAM LISTING

G/L020

PAGE 1

| | |
|--|---|
| | 1 GOTO 6000 |
| | S REM G/L020 SORT POSTINGS 1/79 |
| | 6000 DIM A\$(15,16)14,S(16),C1\$1,I\$(16)14,J\$(16)14 |
| | :DIM L\$(240)2,U\$(16)1,V\$(16)2,W\$(15,16)2,A#27 |
| | :INIT(0A)X1\$ |
| F, G, and H are input/output variable dimensions | :F=1S |
| | :G=16 |
| | :H=14 |
| | :GOTO 6110 |
| Load one sector from each pre-sorted block into merge array A\$() | 6010 DEFFN'33 |
| | :DBACKSPACE #2,BEG |
| | :DSKIP #2,(F+1)*(I-1)+S(I)S |
| | :DATA LOAD DC #2,I\$() |
| | :S(I)=S(I)+1 |
| | :IF END THEN 6020 |
| | :IF S(I)<F+2 THEN 6030 |
| | 6020 PRINT "S(";I;")=";S(I); |
| | :STOP "SORT ERPR" |
| | :INIT(F0)I\$() |
| | 6030 MAT COPY I\$() TO A\$()((I-1)*P1+1,P1) |
| | :U\$(I)=HEX(01) |
| | :RETURN |
| Display status message | 6040 DEFFN'23(Q,A\$,Q1) |
| | :PRINT HEX(01);STR(X1\$,1,0);A\$, |
| | :IF Q1=0 THEN 6060 |
| | :PRINTUSING 6050 ,Q1; |
| | 6050 %##### |
| | 6060 PRINT TAB(64) |
| | :RETURN |
| During pre-sort phase, save pre-sorted block A\$() on Work file During merge phase, save merge array A\$() on External Posting file. | 6070 DEFFN'34 |
| | 6080 N0=G |
| | :MAT MOVE A\$(),L\$(S),N0 TO J\$(J) |
| | :J=J+N0 |
| | :S=S+N0 |
| | :K0=K0+N0 |
| | :PRINT "RECORD NUMBER:", |
| | :PRINTUSING 6050 ,K0; |
| | :PRINT HEX(0D0A0C) |
| | :IF STR(J\$(1),1,1)=C1\$ THEN 6100 |
| | :IF J<=G THEN 6100 |
| | 6090 DATA SAVE DC #T1,J\$() |
| | :J=1 |
| | :INIT(F0)J\$() |
| | :IF S<P+1 THEN 6070 |
| | 6100 RETURN |
| Await operator cue before beginning program | 6110 PRINT HEX(03);"G/L POSTING SORT/UPDATE" |
| | 6120 PRINT "KEY RETURN TO BEGIN; ENTER 'END' TO EXIT" |
| | :INPUT A\$ |
| | :IF A\$="END" THEN 6330 |
| | 6170 PRINT HEX(010A0A) |
| | :PRINT "WORKING...DO NOT INTERRUPT";TAB(64) |
| | :LIMITS T"G/L0F020",P,P,P |
| | :LIMITS T"G/L0F030",S,S,S |
| | 6180 PRINT "MAX NUMBER OF RECORDS: ",(S+P-4)*G |
| | :IF S+P>4 THEN 6190 |
| | :SELECT P9 |
| | :PRINT HEX(0A);"NO RECORDS" |
| | :SELECT P |
| | :GOTO 6350 |
| Open input files (External and Direct Posting files) Work file and output file (External Posting file) Initialize variables | 6190 DATA LOAD DC OPEN T#3,"G/L0F020" |
| | :DATA LOAD DC OPEN T#2,"WORKFILE" |
| | :DATA LOAD DC OPEN T#1,"G/L0F030" |
| | :INIT(F0)C1\$,J\$() |
| | :J,T=1 |
| | :T1=2 |
| | :P=F*G |
| | :P1=G*H |
| | :GOSUB '23(4,"SORT DIRECT POSTINGS",0) |
| Sort blocks of postings, first from Direct Posting file, then from external Posting file Save blocks of postings on Work file as they are sorted | 6200 M=0 |
| | 6210 DATA LOAD DC #T,I\$() |
| | :IF END THEN 6255 |
| | :IF M>0 THEN 6220 |
| | :INIT(F0)A\$() |
| | 6220 M=M+1 |
| | 6230 MAT COPY I\$() TO A\$()((M-1)*P1+1,P1) |
| | :IF M<F THEN 6210 |
| | 6240 MAT SORTA\$() TO W\$(),L\$() |
| | :S=1 |
| | :IF L-N=1 THEN 6250 |
| | :GOSUB '23(5," ",0) |
| | :GOSUB '34 |

G/L020

G/L020 Sort Postings

PROGRAM LISTING

G/L020

PAGE 2

Using '33 to load sectors of sorted postings from each pre-sort block on Work file whenever necessary, merge pre-sorted blocks of postings and save on output file

End output file Erase Work file Go load up-date processor

Reload Menu unless sort has begun

Load report program

```

:DATA SAVE DC #T1,J$( )
6250 N=N+1
:GOSUB '23(7,"BLOCKS SORTED:",N)
:ON L+1GOTO 6200,6270
6255 IF T=3 THEN 6260
:T=3
:GOSUB '23(4,"SORT EXTERNAL POSTINGS",0)
:GOTO 6210
6260 L=1
:IF M>0 THEN 6240
6270 GOSUB '23(4,"MERGE SORTED BLOCKS",0)
:J,S=1
:T1=3
:K0=0
:DBACKSPACE #T1,BEG
:INIT(F0)J$( )
:ON N+1GOTO 6320,6310
6280 INIT(F0)A$( )
:FOR I=1 TO N
:GOSUB '33
:NEXT I
:INIT(01)U$( )
6290 MAT MERGEAS( ) TO U$( ),V$( ),L$( )
:S=1
:GOSUB '34
:IF N0=0 THEN 6300
:IF STR(J$(1),1,1)=C1$ THEN 6320
6300 I=VAL(U$(F+1))
:IF I=0 THEN 6290
:GOSUB '33
:GOTO 6290
6310 GOSUB '34
6320 DATA SAVE DC #T1,END
:GOSUB '23(9,"SORT COMPLETE",0)
:DBACKSPACE #2,BEG
:DATA SAVE DC #2,END
:DBACKSPACE #1,BEG
:DATA SAVE DC #1,END
:GOTO 6340
6330 DEFFN '15
:IF T1=3 THEN 101
6335 PRINT HEX(03); "G/L POSTING SORT LOADING MENU";
:LOAD DC T"G/L000"
6340 DATA SAVE DC CLOSEALL
6350 LOAD DC T"G/L030"6000

```

G/L020

LINE NUMBER CROSS REFERENCE

G/L020

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```

0101 - 6330
6000 - 0001 6350
6020 - 6010
6030 - 6010
6050 - 6040 6080
6060 - 6040
6070 - 6090
6100 - 6080 6080
6110 - 6000
6190 - 6180
6200 - 6250
6210 - 6230 6255
6220 - 6210
6240 - 6260
6250 - 6240
6255 - 6210
6260 - 6255
6270 - 6250
6290 - 6300 6300
6300 - 6290
6310 - 6270
6320 - 6270 6290
6330 - 6120
6340 - 6320
6350 - 6180

```

G/L020

G/L020 Sort Postings

| | VARIABLE | CROSS REFERENCE | G/L020 | PAGE 2 |
|---|-------------|---|--------|--------|
| Miscellaneous, temporary | _____A\$ | - 6000 6040 6040 6120 6120 | | |
| Sort array | _____A\$() | - 6000 6030 6080 6210 6230 6280 | | |
| Hexadecimal F0 (end of file indicator) | _____C1\$ | - 6000 6080 6190 6290 | | |
| Number of sectors sorted at one time | _____F | - 6000 6010 6010 6190 6230 6300 | | |
| Number of records per sector | _____G | - 6000 6080 6080 6180 6190 6190 | | |
| Bytes per record | _____H | - 6000 6190 | | |
| Index | _____I | - 6010 6010 6010 6010 6010 6020 6020 6030 6030 6280 6280 6300 | | |
| | | 6300 | | |
| Input array | _____I\$() | - 6000 6010 6020 6030 6210 6230 | | |
| Index | _____J | - 6080 6080 6080 6080 6090 6190 6270 | | |
| Output array | _____J\$() | - 6000 6080 6080 6090 6090 6190 6240 6270 6290 | | |
| Number of records sorted/merged | _____K0 | - 6080 6080 6080 6270 | | |
| 0 : more blocks to sort; 1 : all blocks sorted | _____L | - 6240 6250 6260 | | |
| Index array (for sort/merge) | _____L\$() | - 6000 6080 6240 6290 | | |
| Count of sectors sorted into A\$() | _____M | - 6200 6210 6220 6220 6230 6230 6260 | | |
| Number of blocks sorted | _____N | - 6240 6250 6250 6250 6270 6280 | | |
| Bytes to move (or just moved) | _____N0 | - 6080 6080 6080 6080 6080 6290 | | |
| Number of elements in A\$() | _____P | - 6090 6170 6170 6170 6180 6180 6190 | | |
| Bytes used in each sector | _____P1 | - 6030 6030 6190 6230 6230 | | |
| Line number to print message on | _____Q | - 6040 6040 | | |
| Quantity to print along with message | _____Q1 | - 6040 6040 6040 | | |
| Miscellaneous, temporary | _____S | - 6010 6080 6080 6080 6090 6170 6170 6170 6180 6180 6240 6270 | | |
| | | 6290 | | |
| Which sector to use next in each block of sectors | _____S() | - 6000 6010 6010 6010 6010 6020 | | |
| Logical file number for input | _____T | - 6190 6210 6255 6255 | | |
| Logical file number for output | _____T1 | - 6090 6190 6240 6270 6270 6320 6330 | | |
| Work array | _____U\$() | - 6000 6030 6280 6290 6300 | | |
| Work array | _____V\$() | - 6000 6290 | | |
| Work array | _____W\$() | - 6000 6240 | | |
| Line feed characters | _____X1\$ | - 6000 6040 | | |

G/L020

SPECIAL FUNCTION CROSS REFERENCE G/L020

PAGE 3

| | | | | | | | | |
|----|---|------------------------------------|--|--|--|--|--|--|
| 15 | - | 6330 | | | | | | |
| 23 | - | 6040 6190 6240 6250 6255 6270 6320 | | | | | | |
| 33 | - | 6010 6280 6300 | | | | | | |
| 34 | - | 6070 6240 6290 6310 | | | | | | |

G/L030 Posting Update

| | PROGRAM LISTING | G/L030 | PAGE 1 |
|--|---|--------|--------|
| Main program begins on line 6000 | 1 GOTO 6000 | | |
| | 5 REM G/L030 POSTING UPDATE 1/79 | | |
| Print error report headings | 10 DIM E\$(16)14,K\$4,K1\$4,K2\$4,K3\$4,C(6,2) | | |
| | 835 X4\$="SRCE DATE REF AMOUNT" | | |
| | :IF F=0 THEN 837 | | |
| | :FOR I1=1 TO 2 | | |
| | :PRINT "ACCT NO ";X4\$;" "; | | |
| | :NEXT I1 | | |
| | :PRINT "ACCT NO ";X4\$ | | |
| | :GOTO 840 | | |
| Print update report headings | 837 PRINT " ACCT ";X4\$;"::";X4\$;"::";X4\$;"::";X4\$ | | |
| Pack a blocked Posting record | 3660 DEFFN'113(A1) | | |
| | :PACK(#####. #)G\$(G7)FROMP1 | | |
| | :IF G7<16 THEN 101 | | |
| | :DBACKSPACE #A1,1S | | |
| Save a full block of Posting records in its original place on disk | :DATA SAVE DC #A1,G\$() | | |
| | :RETURN | | |
| | 4000 DEFFN'76 | | |
| Postings may be printed more than one per line At the end of a line, increment the line counter and check for page over-flow | :IF E2=0 THEN 101 | | |
| | :PRINT | | |
| | :L=L+1 | | |
| | :E2=0 | | |
| | :GOSUB '41("G/L UPDATE",100) | | |
| | :RETURN | | |
| After adding up all postings for a single account, retrieve the Account record, update it with the accumulated postings, save it, and print the account totals | 4020 DEFFN'77 | | |
| | :IF K1\$=K3\$ THEN 101 | | |
| | :IF F1=1 THEN 101 | | |
| | :GOSUB '110(2) | | |
| | 4040 D0=D(1) | | |
| | 4060 D(1)=D(1)+C | | |
| | :D(2)=D(2)+C | | |
| | :D(3)=D(3)+C | | |
| | :DBACKSPACE #2,1S | | |
| | :GOSUB '111(2) | | |
| | :IF E2=0 THEN 4080 | | |
| | :PRINT | | |
| | :L=L+1 | | |
| | :E2=0 | | |
| | 4080 PRINT L1\$;TAB(35); | | |
| | :PRINTUSING 5900 ,C(1,1),C(2,1),C(3,1),C(4,1); | | |
| | :PRINT TAB(94);"OPENING BAL"; | | |
| | :PRINTUSING 5930 ,D0 | | |
| | 4100 PRINT " NET CHANGE"; | | |
| | :PRINTUSING 5930 ,C; | | |
| | :PRINT TAB(29); | | |
| | :PRINTUSING 5930 ,C(1,2);C(2,2);C(3,2);C(4,2); | | |
| | :PRINT TAB(94);"CLOSING BAL"; | | |
| | :PRINTUSING 5930 ,D(1) | | |
| | :PRINT HEX(0A0A) | | |
| Keep a total of postings to credit accounts | 4120 IF L5=1 THEN 4140 | | |
| | :C9=C9+C | | |
| | :GOTO 4160 | | |
| Keep a total of postings to debit accounts | 4140 D9=D9+C | | |
| | 4160 L=L+4 | | |
| | :F1=1 | | |
| | :RETURN | | |
| Save one block of Error records | 4180 DEFFN'82 | | |
| | :IF E1=0 THEN 101 | | |
| | :SKIP #3,END | | |
| | :DATA SAVE DC #3,E\$() | | |
| | :DATA SAVE DC #3,END | | |
| | :INIT(00)E\$() | | |
| | :E1=0 | | |
| | :RETURN | | |
| | 5900 %P/R ### A/P ### A/R ### G/L ### | | |
| | 5910 ### ##/## *****-*****.## | | |
| | 5920 %*****. # | | |
| | 5930 %-*****.## | | |
| Start of main program Retrieve G/L data Open Error file and Posting file Open Account file for keyed file accessing | 6000 GOSUB '42(1) | | |
| | :DATA LOAD DC OPEN T#3,"WORKFILE" | | |
| | :DATA LOAD DC OPEN T#4,"G/L0F020" | | |
| | :GOSUB '130(1,1,2,1,"G/L0F110") | | |
| | :PRINT HEX(03);"GENERAL LEDGER UPDATE" | | |
| Make sure printer is on Select printer for output | 6020 PRINT "PROCESSING...DO NOT INTERRUPT" | | |
| | :GOSUB '60 | | |
| | :SELECT PRINT 215(132) | | |
| Initialize variables and file pointers | 6040 L=66 | | |
| | :G7=16 | | |
| | :E1,E2=0 | | |
| | :INIT(00)K1\$,K2\$,K3\$,E\$() | | |
| | :DBACKSPACE #3,BEG | | |

G/L030

| | |
|---|---|
| Retrieve next posting. Check for end of Posting file. Skip postings to account number 0. All regular accounts (which are the only ones that can be posted to) have zero sub-account numbers | <pre> :DBACKSPACE #4,BEG 6060 GOSUB '112(4) :IF G7>16 THEN 6280 6080 IF P1=0 THEN 6060 :K#=G\$(G7) :STR(K\$,4,1)=HEX(00) :IF K#=K1\$ THEN 6120 :IF K#=K2\$ THEN 6240 :GOSUB '77 :GOSUB '132(1,K\$) :IF G#<>" " THEN 6240 :GOSUB '41("G/L UPDATE",100) 6100 PRINTUSING 5920 ,P1; :FOR I1=1 TO 6 :C(I1,1),C(I1,2)=0 :NEXT I1 :C,E2,F1=0 :K1\$=K\$ 6120 IF E2<4 THEN 6140 :GOSUB '76 6140 IF P5=0 THEN 6200 6160 IF E2=0 THEN 6170 :PRINT TAB(10); 6170 PRINT " "; :PRINTUSING 5910 ,P2;INT(P3);100*(P3-INT(P3));P4;P5; :IF E2=3 THEN 6180 :PRINT "::::"; 6180 C=C+P5 :C(P2+1,1)=C(P2+1,1)+1 :C(P2+1,2)=C(P2+1,2)+P5 :E2=E2+1 6200 P1=0 :GOSUB '113(4) :GOTO 6060 6240 IF E1<16 THEN 6260 :GOSUB '82 6260 E1=E1+1 :E\$(E1)=G\$(G7) :K2\$=K\$:GOTO 6200 6280 GOSUB '76 :GOSUB '77 :GOSUB '82 6300 L=L+5 :GOSUB '41("G/L UPDATE",100) 6320 PRINT HEX(0A0A);"TOTAL NET CHANGE:" :PRINT HEX(0A);"DEBIT ACCOUNTS", :PRINTUSING 5930 ,D9 :PRINT "CREDIT ACCOUNTS", :PRINTUSING 5930 ,C9 :PRINT HEX(0A);"PROOF", :PRINTUSING 5930 ,D9-C9 :PRINT 6340 L=66 :C,C1=0 :E2=4 :G7=16 :F=1 :DBACKSPACE #3,BEG 6360 GOSUB '112(3) :IF P1=0 THEN 6440 :IF G7>16 THEN 6440 6380 IF E2<3 THEN 6400 :PRINT :L=L+1 :E2=0 :GOSUB '41("G/L POSTING ERRORS",100) 6400 PRINTUSING 5920 ,P1; :PRINT " "; :PRINTUSING 5910 ,P2;INT(P3);100*(P3-INT(P3));P4;P5; :IF E2=2 THEN 6420 :PRINT " "; 6420 C=C+P5 :C1=C1+1 :E2=E2+1 :GOTO 6360 6440 DBACKSPACE #3,BEG :DATA SAVE DC #3,END :DBACKSPACE #4,BEG :DATA SAVE DC #4,END :IF E2=0 THEN 6460 </pre> |
| Current posting to same account as last posting? Current posting to same account as last error? | |
| This posting is to a different account than the last posting. Update and print last account totals. Locate this account on Account file | |
| Print account number, clear totals, reset flags, etc. Print up to four postings (for the same account) per line. Don't print zero-amount postings | |
| Start printing each line in the same column. Print posting data. Add posting amount to totals for current account | |
| Resave posting on Posting file with zeroed Account Number field, preventing double updating if this program is rerun | |
| Create Error record for bad posting. First, save any full block of Error records. Copy Posting data to Error record | |
| End of Posting file encountered. Finish printing and updating last posting and account totals. Save final block of Error records | |
| Make sure there's enough room to print update recaps. Print update recap | |
| Reset counters, flags, and Error file position for error report. Retrieve next Error record. Check for end of Error file. Print three errors per line. Accumulate error totals | |
| End of Error file detected. Erase Error file and Posting file | |

G/L030 Posting Update

| PROGRAM LISTING | | G/L030 | PAGE 3 |
|---|---|--------|--------|
| Print last line of error report, if any | :GOSUB '76 | | |
| Print error totals | 6460 PRINT HEX(0A);C1;" ERROR POSTINGS = \$"; | | |
| | :PRINTUSING 5930 ,C | | |
| End program. Close Account file for keyed file accessing Reload Menu. | 6480 DEFFN'15 | | |
| | :GOSUB '139(1) | | |
| | :DATA SAVE DC CLOSEALL | | |
| | :LOAD DC T"G/L000" | | |

G/L030

| LINE NUMBER | CROSS | REFERENCE | G/L030 | PAGE 1 |
|-------------|-------|------------------------------------|--------|--------|
| 0101 - | 3660 | 4000 4020 4020 4180 | | |
| 0837 - | 0835 | | | |
| 0840 - | 0835 | | | |
| 4080 - | 4060 | | | |
| 4140 - | 4120 | | | |
| 4160 - | 4120 | | | |
| 5900 - | 4080 | | | |
| 5910 - | 6170 | 6400 | | |
| 5920 - | 6100 | 6400 | | |
| 5930 - | 4080 | 4100 4100 4100 6320 6320 6320 6460 | | |
| 6000 - | 0001 | | | |
| 6060 - | 6080 | 6200 | | |
| 6120 - | 6080 | | | |
| 6140 - | 6120 | | | |
| 6170 - | 6160 | | | |
| 6180 - | 6170 | | | |
| 6200 - | 6140 | 6260 | | |
| 6240 - | 6080 | 6080 | | |
| 6260 - | 6240 | | | |
| 6280 - | 6060 | | | |
| 6360 - | 6420 | | | |
| 6400 - | 6380 | | | |
| 6420 - | 6400 | | | |
| 6440 - | 6360 | 6360 | | |
| 6460 - | 6440 | | | |

G/L030

| VARIABLE | CROSS | REFERENCE | G/L030 | PAGE 2 |
|---|--------|---|--------|--------|
| Logical file number - Account file | A1 | - 3660 3660 3660 | | |
| Total postings to current account; error total | C | - 4060 4060 4060 4100 4120 4140 6100 6180 6180 6340 6420 6420 | | |
| | | 6460 | | |
| Source of postings (A/P, etc.) | C() | - 0010 4080 4080 4080 4080 4100 4100 4100 4100 6100 6100 6180 | | |
| | | 6180 6180 6180 | | |
| Number of errors | C1 | - 6340 6420 6420 6460 | | |
| \$ total of postings to credit accounts | C9 | - 4120 4120 6320 6320 | | |
| Account file | D() | - 4040 4060 4060 4060 4060 4060 4100 | | |
| Account opening balance | D0 | - 4040 4080 | | |
| \$ total of postings to debit accounts | D9 | - 4140 4140 6320 6320 | | |
| Error file | E\$() | - 0010 4180 4180 6040 6260 | | |
| Error file blocking factor | E1 | - 4180 4180 6040 6240 6260 6260 6260 | | |
| Count postings on printed line | E2 | - 4000 4000 4060 4060 6040 6100 6120 6160 6170 6180 6180 6340 | | |
| | | 6380 6380 6400 6420 6420 6440 | | |
| In progress: 0 = update report, 1 = error listing | F | - 0835 6340 | | |
| Account totals: 0 = not yet printed, 1 = printed | F1 | - 4020 4160 6100 | | |
| Posting file | G\$() | - 3660 3660 6080 6260 | | |
| Posting file blocking factor | G7 | - 3660 3660 6040 6060 6080 6260 6340 6360 | | |
| Index | I1 | - 0835 0835 6100 6100 6100 | | |
| Account file key | K\$ | - 0010 6080 6080 6080 6080 6080 6100 6260 | | |
| Account currently being processed | K1\$ | - 0010 4020 6040 6080 6100 | | |
| Account number of last error | K2\$ | - 0010 6040 6080 6260 | | |
| Hexadecimal zeros | K3\$ | - 0010 4020 6040 | | |
| Line counter | L | - 4000 4000 4060 4060 4160 4160 6040 6300 6300 6340 6380 6380 | | |
| Account name | L1\$ | - 4080 | | |
| Account's normal balance (DB or CR) | L5 | - 4120 | | |
| Posting account number | P1 | - 6080 6100 6200 6360 6400 | | |
| Posting source code | P2 | - 6170 6180 6180 6180 6180 6400 | | |
| Posting date | P3 | - 6170 6170 6170 6400 6400 6400 | | |
| Posting reference | P4 | - 6170 6400 | | |
| Posting amount | P5 | - 6140 6170 6180 6180 6400 6420 | | |
| Keyed file accessing status | Q\$ | - 6080 | | |
| Report heading | X4\$ | - 0835 0835 0835 0837 0837 0837 0837 | | |

G/L030

G/L030 Posting Update

SPECIAL FUNCTION CROSS REFERENCE G/L030

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' 15 - 6480
' 41 - 4000 6080 6300 6380
' 42 - 6000
' 60 - 6020
' 76 - 4000 6120 6280 6440
' 77 - 4020 6080 6280
' 82 - 4180 6240 6280
' 110 - 4020
' 111 - 4060
' 112 - 6060 6360
' 113 - 3660 6200
' 130 - 6000
' 132 - 6080
' 139 - 6480

G/L040 Reports

| | PROGRAM LISTING | G/L040 | PAGE 1 |
|--|--|--------|--------|
| Main program begins on line 6000 | 1 GOTO 6000 5 REM G/L040 REPORTS 1/79 10 DIM C1\$17,D9\$1 :DIM G(3,10),S(10),H(2,3),H1(3) 20 DATA "TRIAL","SPECIAL","MONTHLY","QUARTERLY","REPORT","INCOME STATEMENT","BALANCE SHEET" | | |
| Print the appropriate page and column headings for various report types and formats | 831 IF R1=0 THEN 832 :PRINT TAB(45);"PREVIOUS QUARTER ";R1 832 PRINT HEX(0A);"ACCOUNT NAME"; :ON RGOTO 833,834,835,836 | | |
| Trial report | 833 IF S=2 THEN 834 :PRINT TAB(59);"THIS MONTH PCT"; :IF G7<4 THEN 839 :PRINT TAB(105);"QUARTER PCT" :GOTO 839 | | |
| Special report | 834 PRINT TAB(58);"THIS MONTH" :GOTO 839 | | |
| Monthly report | 835 IF S=2 THEN 834 :PRINT TAB(59);"THIS MONTH PCT"; :IF G7<2 THEN 839 :GOTO 837 | | |
| Quarterly report | 836 IF S=2 THEN 838 :PRINT TAB(61);"QUARTER PCT"; :IF R1>0 THEN 837 :IF G7<4 THEN 839 837 PRINT TAB(105);"YTD BAL PCT" :GOTO 839 838 PRINT TAB(75);"QUARTER"; 839 PRINT :PRINT HEX(0A) :D9\$="\$" | | |
| Precede the first dollar amounts on each page with a dollar sign | 4000 DEFFN'66(X0\$,X0,X1,X2) :PRINT TAB(8);X0\$;TAB(56); :IF R=4 THEN 4005 :PRINTUSING 5910 ,X0; :IF S<>1 THEN 4010 :PRINT TAB(99); :IF R=3 THEN 4015 | | |
| Print recap line | 4005 PRINTUSING 5910 ,X2; :IF R<>4 THEN 4010 :IF S=1 THEN 4015 4010 PRINT :RETURN | | |
| Include monthly total | 4015 PRINT TAB(99); :PRINTUSING 5910 ,X1 :RETURN | | |
| Include quarterly total | 4020 DEFFN'71(F,F1) 4040 IF L3=0 THEN 4060 :D9\$="\$" :GOTO 4080 | | |
| Include yearly total | 4060 FOR I=1 TO 10 :G(F1,I)=G(F1,I)+S2*D(F1) :NEXT I 4080 IF L3<>3 THEN 4100 :L6=10 4100 PRINT TAB(55+(F-1)*(14+8*(2-S))); :PRINT D9\$; :PRINTUSING 5910 ,G(F1,L6); :IF S=2 THEN 4120 :PRINTUSING 5900 ,ABS(G(F1,L6)/H1(F1))*100; | | |
| Accumulate and print | 4120 FOR I=1 TO L6 :G(F1,I)=0 :NEXT I :IF L5=2 THEN 4130 :H(1,F1)=H(1,F1)+D(F1) :RETURN | | |
| Precede total amounts with a dollar sign | 4130 H(2,F1)=H(2,F1)+D(F1) :RETURN | | |
| Accumulate regular account to all total levels | 4140 DEFFN'90 :F=INT((L6+3)/3) :IF F<4 THEN 101 :F=3 :RETURN | | |
| You may delete this line. This subroutine is never used when L3 = 3 | 4200 DEFFNZ(Z9)=Z9+(1-ABS(SGN(Z9)))*1E20 5000 IF L2<>0 THEN 101 :ON SGOTO 5060,5040,5020 | | |
| Print amount (with percent of sales on income statement) | 5020 D(7)=D(2) :IF L4=2 THEN 5040 :D(2)=0 5040 D(6)=D(5) :D(5)=D(4) | | |
| Clear all totals below and including the level just printed | | | |
| Accumulate debit total | | | |
| Accumulate credit total | | | |
| Accounts with level 0, 1, or 2 print in column 1; with level 3, 4, or 5 in column 2; with level 6, 7, 8, or 9 in column 3 on balance sheet | | | |
| If Z9 = 0, make Z9 a large value (Z9 will be used as a divisor and must be > 0) | | | |
| Move totals (regular accounts only) | | | |
| Yearly total | | | |
| Zero This Year Total field of income and expense accounts | | | |
| Quarterly total | | | |

G/L040

G/L040 Reports

PROGRAM LISTING

G/L040

PAGE 2

| | |
|--|--|
| Zero This Quarter Total field of income and expense accounts | :D(4)=D(3) :IF L4=2 THEN 5070 :D(3)=0 |
| Monthly total | 5060 IF L4=2 THEN 5070 :D(1)=0 |
| Zero This Month Total field of income and expense accounts | 5070 DBACKSPACE #2,15 :GOSUB '111(2) :RETURN |
| Start of main program Retrieve G/I data | 5900 % ###,### 5910 %-#####.## 5920 %#####.# |
| Compute effective month from Fiscal Year Ends field and current month (from Today's Date field) | 6000 GOSUB '42(1) :UNPACK(##)G3\$ TO G6 :G7=12*((G6-G5+12)/12-INT((G6-G5+12)/12)) :GOSUB '130(1,1,2,1,"G/L0F110") :LIMITS T#3,"G/L0F030",Z,Z,Z :LIMITS T#4,"G/L0F020",Y,Y,Y |
| Open Account file for keyed file accessing | 6020 SELECT PRINT 005(64) :GOSUB '33(3) :IF (Z-2)*16+(Y-2)*16=0 THEN 6040 :GOSUB '32(832) :PRINT "A MAXIMUM OF";Z-2;"DIRECT AND";Y-2;"INDIRECT POSTINGS NOT T UPDATED"; |
| Determine if any postings have not been updated | 6040 R,R1,S,P=0 :L=66 :GOSUB '34(327,1,0,5) :R=X0 :IF R=0 THEN 6800 :IF R=2 THEN 6080 :IF R<5 THEN 6060 :GOSUB '34(375,1,1,3) :S=X0 :GOTO 6100 |
| Initialize report parameters | 6060 GOSUB '34(345,1,1,2) :S=X0 |
| Enter report type (0 = exit, 1 = trial, 2 = special, 3 = monthly, 4 = quarterly, 5 = move totals) | 6080 IF R<>4 THEN 6100 :GOSUB '34(362,1,0,3) :R1=X0 |
| Enter whether to move monthly, quarterly, or yearly totals | 6100 GOSUB '37(1,0,1,"ENTRY CORRECT?") :IF X0=0 THEN 6020 :IF R<>5 THEN 6120 :GOSUB '37(1,0,1,"HAVE YOU RUN ALL YOUR REPORTS?") :IF X0=0 THEN 6020 :GOSUB '32(192) :PRINT "WORKING...DO NOT INTERRUPT" :GOSUB '135(1) |
| Verify entry of report options | 6110 IF G\$<>" " THEN 6020 :GOSUB '110(2) :GOSUB 5000 :GOSUB '137(1) :GOTO 6110 |
| Encourage operator to run all reports prior to moving totals | 6120 X4\$=" " :RESTORE R :READ X4\$ 6140 RESTORE S+5 :READ STR(X4\$,LEN(X4\$)+1) :GOSUB '60 :GOSUB '32(192) :PRINT "PRINTING..." :SELECT PRINT 215(132) :INIT(00)X0\$:UNPACK(##)X0\$ TO G(),H() |
| Construct report title from type and format options | 6160 GOSUB '132(1,HEX(99999900)) :GOSUB '110(2) :H1(1)=FNZ(D(1)) :H1(2)=FNZ(D(2)) :H1(3)=FNZ(D(3+R1)) :IF INT((G7+2)/3)>R1 THEN 6180 :H1(2)=FNZ(D(7)) |
| Make sure printer is on | 6180 GOSUB '135(1) :IF S<>1 THEN 6240 6200 GOSUB '132(1,HEX(30000000)) :IF G\$=" " THEN 6240 |
| Select printer for output | 6220 GOSUB '137(1) :IF G\$<>" " THEN 6660 |
| Zero totals | 6240 GOSUB '110(2) :IF R=2 THEN 6250 :IF L4<>5 THEN 6660 |
| Retrieve sales accounts total from special Account record - for use as divisors in computing % of sales | 6250 L6=L6+1 :S2=1 :IF L5=51 THEN 6260 |
| If the quarter being reported is not in the current fiscal year, use last year's YTD sales total | |
| Position Account file to first balance sheet account | |
| Position Account file to first income statement account | |
| Locate next Account record. Retrieve account data. Check for end of report. Convert Total Level field for use as total array index. Compute normal sign of account balance | |

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G/L040 Reports

PROGRAM LISTING

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| | |
|--|--|
| | :S2=-1 |
| Use requested quarterly totals | 6260 IF R1=0 THEN 6320 |
| | :D(3)=D(3+R1) |
| | :D(1)=0 |
| If the quarter being reported is not in the current year, use last year's YTD total | :IF INT((G7+2)/3)>R1 THEN 6320 |
| | :D(2)=D(7) |
| Include only regular accounts on the special report | 6320 IF R<2 THEN 6340 |
| | :IF L2<>0 THEN 6220 |
| | :IF L9=0 THEN 6220 |
| Check for full page Print title account's name in expanded type Establish the standard account balance (DB or CR) which will prevail until the next title account comes up | 6340 GOSUB '41(X4\$,110) |
| | :IF L3=3 THEN 6380 |
| | :IF L3<>1 THEN 6360 |
| | :PRINT HEX(0E); |
| | :S1=LS |
| | :GOTO 6380 |
| | 6360 IF L3<>0 THEN 6380 |
| | :PRINTUSING S920 ,L1; |
| | 6380 PRINT TAB(8+9-L6);L1\$;TAB(48); |
| | 6400 IF L3=1 THEN 6420 |
| | :IF L3=3 THEN 6420 |
| | :ON RGOSUB 6460 ,6560 ,6580 ,6620 |
| | :D9\$=" " |
| Print regular account's number Print account name Nothing else to print for title and heading accounts | 6420 PRINT |
| | :IF L7<9 THEN 6440 |
| | :L=60 |
| | :GOTO 6220 |
| | 6440 PRINT STR(X1\$,1,L7+1) |
| | :L=L+L7+1 |
| | :GOTO 6220 |
| Otherwise, branch to appropriate program area to continue printing | 6460 IF S=1 THEN 6480 |
| | :GOSUB '90 |
| | :GOSUB '71(F,1) |
| | :GOTO 6540 |
| If Extra Line Advance field is 9, advance to the next report page Print extra blank lines. | 6480 GOSUB '71(1,1) |
| | :IF G7<4 THEN 6540 |
| | :GOSUB '71(3,3) |
| Monthly trial balance | 6540 IF L8=0 THEN 101 |
| | :FOR I=1 TO 10 |
| | :S(I)=S(I)+D(I)*S2 |
| | :NEXT I |
| | :RETURN |
| Trial income statement: include monthly and current quarter totals | 6560 PRINT TAB(SS); |
| | :PRINTUSING S910 ,D(1); |
| | :RETURN |
| Accumulate new sales totals | 6580 IF S=2 THEN 6600 |
| | :GOSUB '71(1,1) |
| | :IF G7<2 THEN 101 |
| | :GOSUB '71(3,2) |
| | :RETURN |
| Special report: print monthly totals | 6600 GOSUB '90 |
| | :GOSUB '71(F,1) |
| | :RETURN |
| Monthly income statement: include monthly and yearly totals | 6620 IF S=2 THEN 6640 |
| | :GOSUB '71(1,3) |
| | :IF R1>0 THEN 6630 |
| | :IF G7<4 THEN 101 |
| | 6630 GOSUB '71(3,2) |
| | :RETURN |
| Quarterly income statement: include quarterly and yearly totals | 6640 GOSUB '90 |
| | :GOSUB '71(F,3) |
| | :RETURN |
| Quarterly balance sheet: include quarterly totals | 6660 IF R=2 THEN 6020 |
| | :L=L+7-2*S |
| | :GOSUB '41(X4\$,110) |
| | :C1\$="PROOF" |
| | :IF S=2 THEN 6720 |
| | :C1\$="RETAINED EARNINGS" |
| | :IF R<>1 THEN 6720 |
| After printing a trial income statement, retrieve the special sales totals record and replace the totals with new totals accumulated during this report | 6670 GOSUB '132(1,HEX(99999900)) |
| | :GOSUB '110(2) |
| | 6680 FOR I=1 TO 10 |
| | :D(I)=S(I) |
| | :NEXT I |
| Replace monthly, yearly, and quarterly totals | 6700 DBACKSPACE #2,15 |
| | :GOSUB '111(2) |
| | :PRINT HEX(0A) |
| | :X0=S(2) |
| Save updated special sales totals record | :IF INT((G7+2)/3)>R1 THEN 6710 |
| | :X0=S(7) |
| Print total debits, total credits, and bottom line (Proof/Retained Earnings) | 6710 GOSUB '66("SALES ACCOUNTS TOTAL",S(1),X0,S(3+R1)) |
| | 6720 PRINT HEX(0A); |

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G/L040 Reports

PROGRAM LISTING

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End program. Close Account file for keyed
file accessing Reload Menu

```

:GOSUB '66("DEBIT TOTAL",H(1,1),H(1,2),H(1,3))
:GOSUB '66("CREDIT TOTAL",H(2,1),H(2,2),H(2,3))
:PRINT HEX(0A)
:GOSUB '66(C1$,H(2,1)-H(1,1),H(2,2)-H(1,2),H(2,3)-H(1,3))
:GOTO 6020
6600 DEFFN'15
:PRINT HEX(03);"G/L REPORTS LOADING MENU";
:GOSUB '139(1)
:LOAD DC T"G/L000"

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G/L040

LINE NUMBER CROSS REFERENCE

G/L040

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```

0101 - 4140 5000 6540 6580 6620
0832 - 0831
0833 - 0832
0834 - 0832 0833 0835
0835 - 0832
0836 - 0832
0837 - 0835 0836
0838 - 0836
0839 - 0833 0834 0835 0836 0837
4005 - 4000
4010 - 4000 4005
4015 - 4000 4005
4060 - 4040
4080 - 4040
4100 - 4080
4120 - 4100
4130 - 4120
5000 - 6110
5020 - 5000
5040 - 5000 5020
5060 - 5000
5070 - 5040 5060
5900 - 4100
5910 - 4000 4005 4015 4100 6560
5920 - 6360
6000 - 0001
6020 - 6100 6100 6110 6660 6720
6040 - 6020
6060 - 6040
6080 - 6040
6100 - 6040 6080
6110 - 6110
6120 - 6100
6180 - 6160
6220 - 6320 6320 6420 6440
6240 - 6180 6200
6250 - 6240
6260 - 6250
6320 - 6260 6260
6340 - 6320
6360 - 6340
6380 - 6340 6340 6360
6420 - 6400 6400
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6540 - 6460 6480
6560 - 6400
6580 - 6400
6600 - 6580
6620 - 6400
6630 - 6620
6640 - 6620
6660 - 6220 6240
6710 - 6700
6720 - 6660 6660
6800 - 6040

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G/L040 Reports

| | VARIABLE CROSS REFERENCE | G/L040 | PAGE 2 |
|--|---|--------|--------|
| Label: "proof" or "retained earnings" | C1\$ - 0010 6660 6660 6720 | | |
| Account file | D () - 4060 4120 4130 5020 5020 5040 5040 5040 5040 5040 5040 5040 | | |
| | 5040 5060 6160 6160 6160 6160 6260 6260 6260 6260 6260 6540 | | |
| | 6560 6680 | | |
| \$ character | D9\$ - 0010 0839 4040 4100 6400 | | |
| Column to print in (1, 2, or 3). | F - 4020 4100 4140 4140 4140 6460 6600 6640 | | |
| Specifies which element of account totals (0 ()) to use | F1 - 4020 4060 4060 4060 4100 4100 4100 4120 4120 4120 4120 4130 | | |
| | 4130 4130 | | |
| Report totals | G () - 0010 4060 4060 4100 4100 4120 6140 | | |
| G/I file | G3\$ - 6000 | | |
| Month the fiscal year ends | G5 - 6000 6000 | | |
| Month from Today's Date field | G6 - 6000 6000 6000 | | |
| Effective month from start of fiscal year | G7 - 0833 0835 0836 6000 6160 6260 6480 6580 6620 6700 | | |
| Total debits, total credits | H () - 0010 4120 4120 4130 4130 6140 6720 6720 6720 6720 6720 6720 | | |
| | 6720 6720 6720 6720 6720 6720 | | |
| Sales accounts, total | H1 () - 0010 4100 6160 6160 6160 6160 | | |
| Index | I - 4060 4060 4060 4060 4120 4120 6540 6540 6540 6540 6540 | | |
| | 6680 6680 6680 6680 | | |
| Line count | L - 6040 6420 6440 6440 6660 6660 | | |
| Account number | L1 - 6360 | | |
| Account name | L1\$ - 6380 | | |
| Sub-account number | L2 - 5000 6320 | | |
| Account type | L3 - 4040 4080 6340 6340 6360 6400 6400 | | |
| Account's report type | L4 - 5020 5040 5060 6240 | | |
| Account's normal balance | L5 - 4120 6250 6340 | | |
| Account's total level | L6 - 4080 4100 4100 4120 4140 6250 6250 6380 | | |
| Account's extra line advance | L7 - 6420 6440 6440 | | |
| Sales account? | L8 - 6540 | | |
| Include on special report? | L9 - 6320 | | |
| Page counter | P - 6040 | | |
| Keyed file accessing status | Q\$ - 6110 6200 6220 | | |
| Report type | R - 0832 4000 4000 4005 6040 6040 6040 6040 6040 6080 6100 6120 | | |
| | 6240 6320 6400 6660 6660 | | |
| Specifies which quarter to print | R1 - 0831 0831 0836 6040 6080 6160 6160 6260 6260 6260 6620 6700 | | |
| | 6710 | | |
| Report format | S - 0833 0835 0836 4000 4005 4100 4100 5000 6040 6040 6060 6140 | | |
| | 6180 6240 6460 6580 6620 6660 6660 | | |
| Special sales totals record (see 0 ()) | S () - 0010 6540 6540 6680 6700 6700 6710 6710 | | |
| Current standard account balance (CR or OB) | S1 - 6250 6340 | | |
| Sign of account balance | S2 - 4060 6250 6250 6540 | | |
| Miscellaneous, temporary | X0 - 4000 4000 6040 6040 6060 6080 6100 6100 6700 6700 6710 | | |
| Miscellaneous, temporary | X0\$ - 4000 4000 6140 6140 | | |
| Miscellaneous, temporary | X1 - 4000 4015 | | |
| Line advance characters | X1\$ - 6440 | | |
| Miscellaneous, temporary | X2 - 4000 4005 | | |
| Report title | X4\$ - 6120 6120 6140 6140 6340 6660 | | |
| Active sectors in External Posting file + 2 | Y - 6000 6000 6000 6020 6020 | | |
| Active sectors in Direct Posting file + 2 | Z - 6000 6000 6000 6020 6020 | | |
| Miscellaneous, temporary | Z9 - 4200 4200 4200 | | |

G/L040

| | SPECIAL FUNCTION CROSS REFERENCE | G/L040 | PAGE 3 |
|---------|---|--------|--------|
| ' 15 - | 6800 | | |
| ' 32 - | 6020 6100 6140 | | |
| ' 33 - | 6020 | | |
| ' 34 - | 6040 6040 6060 6080 | | |
| ' 37 - | 6100 6100 | | |
| ' 41 - | 6340 6660 | | |
| ' 42 - | 6000 | | |
| ' 60 - | 6140 | | |
| ' 66 - | 4000 6710 6720 6720 6720 | | |
| ' 71 - | 4020 6460 6480 6480 6580 6580 6600 6620 6630 6640 | | |
| ' 90 - | 4140 6460 6600 6640 | | |
| ' 110 - | 6110 6160 6240 6670 | | |
| ' 111 - | 5070 6700 | | |
| ' 130 - | 6000 | | |
| ' 132 - | 6160 6200 6670 | | |
| ' 135 - | 6100 6180 | | |
| ' 137 - | 6110 6220 | | |
| ' 139 - | 6800 | | |

| | |
|---|---|
| Main program begins on line 6000 | 1 GOTO 6000 |
| | 5 REM G/L050 ACCOUNT F/M 1/79 |
| | 10 DATA "REGULAR", "TITLE", "TOTAL", "HEADING", "INCOME STMT.", "BALANCE SHEET", "DB", "CR", "NO", "YES" |
| Print appropriate headings for either type of report | 835 PRINT "ACCOUNT";TAB(10);"NAME"; :IF F2=1 THEN 837 :PRINT TAB(46);"THIS MD THIS YEAR THIS QTR PREV QTR-1 PREV QTR-2 PREV QTR-3 LAST YEAR"; |
| At CRT location A1, display label number X0+1 from DATA table | 837 PRINT 4100 DEFFN '90(A1,X0) :GOSUB '32(A1) |
| At current CRT location, display label X0+1 from DATA table | 4120 DEFFN '91(X0) :PESTORE X0+1 :READ X0\$:PRINT X0\$;TAB(19) :RETURN |
| At TAB position X1, print label X0+1 from DATA table | 4140 DEFFN '92(X0,X1) :RESTORE X0+1 :READ X0\$:PRINT TAB(X1);X0\$; :RETURN |
| Enter Account Number field. Enter Sub-account Number field. Locate record for account/sub-account just entered | 5000 GOSUB '34(266,7,0,99999.9) :L1=X0 :IF L1=0 THEN 101 :GOSUB '34(274,2,0,99) :L2=X0 :PACK(#####)X0\$ FPM L1*1000+L2 :GOSUB '132(1,X0\$) :PETURN |
| Branch to enter the value for field F | 5100 ON F GOTO 5120,5140,5180,5200,5220,5240,5260,5280 :GOTO 5300 |
| Enter Account Name field | 5120 GOSUB '34(330,31,0,0) :L1\$=X0\$:RETURN |
| Enter Account Type field. Type must be 0 if Sub-account Number field is 0, and vice-versa. Display decoded Account Type field | 5140 L3=0 :IF L2=0 THEN 5160 :GOSUB '34(401,1,0,3) :L3=X0 :IF L3=0 THEN 5140 5160 GOSUB '32(400) :PRINT L3; :GOSUB '91(L3) :RETURN |
| Enter Report Type field. Display decoded Report Type field | 5180 GOSUB '34(465,1,1,2) :L4=X0 :GOSUB '90(467,L4+3) :RETURN |
| Enter Normal Balance field. Display decoded Normal Balance field | 5200 GOSUB '34(529,1,1,2) :L5=X0 :GOSUB '90(531,L5+5) :RETURN |
| Enter Total Level field | 5220 GOSUB '34(593,1,0,9) :L6=X0 :RETURN |
| Enter Extra Line Advance field | 5240 GOSUB '34(657,1,0,9) :L7=X0 :RETURN |
| Enter whether this is a sales account. Display "yes" or "no" | 5260 GOSUB '34(721,1,0,1) :L8=X0 :GOSUB '90(723,L8+8) :RETURN |
| Enter whether this account is on the special report. Display "yes" or "no" | 5280 GOSUB '34(785,1,0,1) :L9=X0 :GOSUB '90(787,L9+8) :RETURN |
| Enter one of the amount fields | 5300 GOSUB '34(64*F-141,13,-999999999.99,999999999.99) :D(F-8)=X0 :RETURN |
| Display account data | 5400 GOSUB '32(265) :PRINT USING 5920,L1;L2 :GOSUB '36(11) :PRINT L1\$;TAB(31) :GOSUB '36(17) :PRINT L3; :GOSUB '91(L3) :GOSUB '36(17) :PRINT L4; 5420 GOSUB '91(L4+3) :GOSUB '36(17) :PRINT L5; :GOSUB '91(L5+5) |
| Account Name field | |
| Account Type field | |
| Report Type field | |

G/L050 Account File Maintenance

PROGRAM LISTING

G/L050

PAGE 2

| | |
|---|---|
| Total Level field | :GOSUB '36(17) :PRINT L6 |
| Extra Line Advance field | :GOSUB '36(17) :PRINT L7 |
| Sales Account Flag field | S440 GOSUB '36(17) :PRINT L8; :GOSUB '91(L8+8) :GOSUB '36(17) |
| Special Report Flag field | :PRINT L9; :GOSUB '91(L9+8) |
| Amount fields | S460 GOSUB '32(384) :FOR I=1 TO 7 :GOSUB '36(S2) :PRINTUSING S910 ,D(I) :NEXT I :RETURN |
| Start of main program Open Account file for keyed file accessing Enter operation code and branch to appropriate program area | S900 %#####.# S910 %-#####.## S920 %#####.#/## 6000 GOSUB '130(1,1,2,1,"G/L0F110") 6020 GOSUB '33(4) :GOSUB '37(1,0,3,"ENTER OPERATION CODE (0=EXIT; 1=ADD; 2=CHANGE/DELETE; 3=PPINT)") :C=X0 :ON C+1 GOTO 6S00 ,6040 ,6180 ,6280 |
| Operation is ADD Enter account number and make sure it's not already on file Create key for account number just entered | 6040 GOSUB '33(4) :GOSUB '32(30) :PRINT "ADD " 6060 GOSUB S000 :IF L1=0 THEN 6020 :IF Q#<" " THEN 6080 :GOSUB '3S("ALREADY ON FILE") :GOTO 6060 6080 GOSUB '133(1,X0#) :IF Q#<" " THEN 6060 :FOR F=1 TO 8 :GOSUB S100 :NEXT F :IF L3>0 THEN 6240 :FOR F=9 TO 15 :GOSUB S100 :NEXT F :GOTO 6240 |
| Enter data for new account Enter amounts on regular accounts only | 6160 GOSUB '37(3,0,0,"ENTER DELETE CODE") :IF X0#<"DEL" THEN 6240 :PACK(#####)X0\$FROML1*1E3+L2 :GOSUB '131(1,X0#) :IF Q#<" " THEN 6240 :GOSUB '3S("RECORD DELETED") :GOSUB '33(4) :ON CGOTO 6040 ,6180 |
| Operation is DELETE Verify deletion Delete key, then branch back to appropriate program area | 6180 GOSUB '32(30) :PRINT "CHANGE"; 6200 GOSUB S000 :IF L1=0 THEN 6020 :IF Q#=" " THEN 6220 :GOSUB '3S("NOT ON FILE") :GOTO 6200 6220 GOSUB '110(2) :DBACKSPACE #2,15 :GOSUB S400 |
| Operation is CHANGE/DELETE Enter account number and make sure it is on file Retrieve and display account data | 6240 GOSUB '37(2,0,99,"ENTER FIELD TO CHANGE (99=DELETE)") :F=X0 :IF F=0 THEN 6260 :IF F=99 THEN 6160 :IF F>15 THEN 6240 :GOSUB S100 :GOTO 6240 |
| Allow changes to displayed data | 6260 GOSUB '111(2) :ON C GOTO 6040 ,6180 |
| No more changes Save data, then branch back to appropriate program area | 6280 GOSUB '32(30) :PRINT "PRINT " |
| Operation is PRINT | 6300 SELECT PPINT 00S(64) :GOSUB '37(1,0,3,"ENTER REPORT TYPE (0=NONE; 1=DESCRIPTIONS; 2=A MOUNTS; 3=BOTH)") :F2=X0 :IF F2=0 THEN 6020 :P=0 :L=66 :GOSUB '60 :SELECT PRINT 21S(132) |
| Enter type of report Set page and line counters. Make sure printer is on; select printer for output Retrieve G/L data Locate first Account record | |

G/L050

| | | |
|--|------|--|
| Retrieve account data | 6320 | IF Q\$<>" " THEN 6300 |
| Include just regular accounts on "amounts only" report | 6340 | GOSUB '41("GENERAL LEDGER ACCOUNTS",110) |
| After checking for page overflow, print Account Number and Account Name fields | 6360 | GOSUB '92(L3,48) |
| | 6380 | PRINT TAB(89);"TOP/PAGE"; |
| | 6400 | IF L8=0 THEN 6420 |
| | 6420 | IF L9=0 THEN 6440 |
| | 6440 | PRINT |
| Print regular account amounts except on "descriptions only" report | 6460 | IF L2<>0 THEN 6480 |
| | 6480 | GOSUB '137(1) |
| Locate next account. | 6500 | DEFFN'15 |
| End of program. Close Account file for keyed file accessing Reload Menu | | LOAD DC T"G/L000" |

G/L050

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0101 - 5000
0837 - 0835
5000 - 6060 6200
5100 - 6060 6080 6240
5120 - 5100
5140 - 5100 5140
5160 - 5140
5180 - 5100
5200 - 5100
5220 - 5100
5240 - 5100
5260 - 5100
5280 - 5100
5300 - 5100
5400 - 6220
5900 - 6340
5910 - 5460 6460
5920 - 5400
6000 - 0001
6020 - 6060 6200 6300
6040 - 6020 6160 6260
6060 - 6060 6080
6080 - 6060
6160 - 6240
6180 - 6020 6160 6260
6200 - 6200
6220 - 6200
6240 - 6080 6080 6160 6160 6240 6240
6260 - 6240
6280 - 6020
6300 - 6320
6320 - 6480
6340 - 6320
6360 - 6340
6380 - 6360
6400 - 6360 6360
6420 - 6400
6440 - 6420
6460 - 6340
6480 - 6320 6460 6460
6500 - 6020

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G/L050 Account File Maintenance

| | VARIABLE CROSS REFERENCE | G/L050 | PAGE 2 |
|----------------------------------|--|-------------------------------|--------|
| CRT location | A1 - 4100 4100 | | |
| Operation code | C - 6020 6020 6160 6260 | | |
| Account file | D () - 5300 5460 6460 6460 6460 6460 6460 6460 6460 6460 | | |
| Field to enter or change | F - 5100 5300 5300 6080 6080 6080 6080 6240 6240 6240 6240 | | |
| Type of report | F2 - 0835 6300 6300 6320 6340 6460 | | |
| Index | I - 5460 5460 5460 | | |
| Line counter | L - 6300 6440 6440 6460 6460 | | |
| Account number | L1 - 5000 5000 5400 6060 6200 6340 | | |
| Account name | L1# - 5120 5400 6340 | | |
| Sub-account number | L2 - 5000 5000 5140 5400 6160 6320 6340 6340 6460 | | |
| Account type | L3 - 5140 5140 5140 5160 5160 5400 5400 6080 6360 | | |
| Account's report type | L4 - 5180 5180 5400 5420 6360 | | |
| Account's normal balance | L5 - 5200 5200 5420 5420 6360 | | |
| Account's total level (DB or CR) | L6 - 5220 5420 6360 | | |
| Account's extra line advance | L7 - 5240 5420 6360 6360 6360 | | |
| Sales account | L8 - 5260 5260 5440 5440 6400 | | |
| Special report | L9 - 5280 5280 5440 5440 6420 | | |
| Page counter | P - 6300 | | |
| Keyed file accessing status | Q# - 6060 6080 6160 6200 6320 | | |
| Miscellaneous, temporary | X0 - 4100 4120 4120 4140 4140 5000 5000 5140 5180 5200 5220 5240 | | |
| | | 5260 5280 5300 6020 6240 6300 | |
| Miscellaneous, temporary | X0# - 4120 4120 4140 4140 5000 5000 5120 6080 6160 6160 6160 | | |
| TAB position | X1 - 4140 4140 | | |

G/L050

| | SPECIAL FUNCTION CROSS REFERENCE | G/L050 | PAGE 3 |
|---------|--|--------|--------|
| ' 15 - | 6500 | | |
| ' 32 - | 4100 5160 5400 5460 6040 6180 6280 | | |
| ' 33 - | 6020 6040 6160 | | |
| ' 34 - | 5000 5000 5120 5140 5180 5200 5220 5240 5260 5280 5300 | | |
| ' 35 - | 6060 6160 6200 | | |
| ' 36 - | 5400 5400 5400 5420 5420 5420 5440 5440 5460 | | |
| ' 37 - | 6020 6160 6240 6300 | | |
| ' 41 - | 6340 | | |
| ' 42 - | 6300 | | |
| ' 60 - | 6300 | | |
| ' 90 - | 4100 5180 5200 5260 5280 | | |
| ' 91 - | 4120 5160 5400 5420 5420 5440 5440 | | |
| ' 92 - | 4140 6360 6360 6360 | | |
| ' 110 - | 6220 6320 | | |
| ' 111 - | 6260 | | |
| ' 130 - | 6000 | | |
| ' 131 - | 6160 | | |
| ' 132 - | 5000 | | |
| ' 133 - | 6080 | | |
| ' 135 - | 6300 | | |
| ' 137 - | 6480 | | |
| ' 139 - | 6500 | | |

G/L060 Reorganize

| PROGRAM LISTING | | G/L060 | PAGE 1 |
|--|------|---|--------|
| Wait for operator cue to begin | 5 | REM G/L060 REORGANIZE 1/79 | |
| | 20 | PRINT HEX(03);"G/L ACCOUNT FILE REORGANIZE" | |
| | | :PRINT "OK TO BEGIN?" | |
| | | :INPUT X0 | |
| | | :IF X0<>1 THEN 40 | |
| Load actual reorganize processor | 30 | PRINT HEX(030A0A0A0A);"REORGANIZE G/L ACCOUNT FILE" | |
| | | :LOAD DC T"KFAM3503" 1 ,3499 | |
| End program Reload Menu | 40 | DEFFN'15 | |
| | | :PRINT HEX(03);"REORGANIZE NOT BEGUN. LOADING MENU.;" | |
| | | :LOAD DC T"G/L000" | |
| These variables pass parameters to the actual reorganize processor | 101 | RETURN | |
| | 4210 | N1\$="G/L0F110" | |
| | | :P1\$="B10" | |
| | | :N2=1 | |
| | | :P2\$="B10" | |
| | | :N3\$="WORKFILE" | |
| | | :P3\$="B10" | |
| | | :O3\$="Y" | |
| | | :O6\$="C" | |
| | | :N4=1 | |
| | | :P4\$="B10" | |
| | | :O4\$="Y" | |
| | | :NS\$="G/L000" | |
| | | :P5\$="B10" | |

G / L 0 6 0

| LINE NUMBER CROSS REFERENCE | | G/L060 | PAGE 1 |
|-----------------------------|---|--------|--------|
| 0001 | - | 0030 | |
| 0040 | - | 0020 | |
| 3499 | - | 0030 | |

G / L 0 6 0

| VARIABLE CROSS REFERENCE | | G/L060 | PAGE 2 |
|------------------------------------|------|-------------|--------|
| Source file | N1\$ | - 4210 | |
| Source key file number | N2 | - 4210 | |
| Output file | N3\$ | - 4210 | |
| Output key file number | N4 | - 4210 | |
| Program to load after reorganizing | NS\$ | - 4210 | |
| Output file exists | O3\$ | - 4210 | |
| Output key file exists | O4\$ | - 4210 | |
| Copy output over source | O6\$ | - 4210 | |
| Disk address - source | P1\$ | - 4210 | |
| Disk address key file | P2\$ | - 4210 | |
| Disk address - output | P3\$ | - 4210 | |
| Disk address - output key file | P4\$ | - 4210 | |
| Disk address - program NS\$ | P5\$ | - 4210 | |
| Miscellaneous temporary | X0 | - 0020 0020 | |

G / L 0 6 0

| SPECIAL FUNCTION CROSS REFERENCE | | G/L060 | PAGE 3 |
|----------------------------------|---|--------|--------|
| 15 | - | 0040 | |

G/L070 General Information File Maintenance

| | PPOGRAM LISTING | G/L070 | PAGE 1 |
|---|---|--------|--------|
| Program execution begins on line 6000. | 1 GOTO 6000 5 REM G/L070 GENEPAL INFO. F/M 1/79 101 RETURN | | |
| Display CRT maks 1 Display G/I data | 5300 GOSUB '33(5) :GOSUB '32(274) 5301 PRINT G1;TAB(9) :GOSUB '36(19) :PRINT G2;TAB(9) :GOSUB '36(19) :PRINT G3;TAB(9) :GOSUB '36(19) :PRINT G4;TAB(9) :GOSUB '36(19) :PRINT G5;TAB(9) :FOR I=1 TO 5 :GOSUB '36(20) :PRINT STR(G2\$(I),1,24) :NEXT I 5310 GOSUB '39(306,G3\$) :PRINT :GOSUB '36(51) :GOSUB '40(STR(G3\$,4)) :PRINT :GOSUB '36(51) :GOSUB '40(STR(G3\$,7)) :PRINT :GOSUB '36(51) :HEXPRINT STR(G3\$,12,1) :GOSUB '36(51) :HEXPRINT STR(G3\$,15,1) :RETURN | | |
| Reload Menu. | 5400 DEFFN'15 :SELECT PRINT 005(64) :PRINT HEX(03);"G/I FM LOADING MENU" :LOAD DC T"G/L000" 5900 %COMPANY CODE ## NEXT CHECK NO. ##### O.T. RATE ##.## HOURLY RATE ##.## FISCAL YR ENDS ## 5910 %COMPANY NAME ##### FED/STATE TAX NUMB ERS ##### 5920 %ADDRESS ##### ##### | | |
| Enter field to change Branch to subroutines to change fields requested | 6000 GOSUB '42(1) :GOSUB 5300 6005 GOSUB '34(128,2,0,16) :C=X0 :DN C+1GOSUB 5400 ,6010 ,6020 ,6030 ,6040 ,6045 ,6050 ,6050 , 6050 ,6050 ,6050 ,6060 ,6060 ,6060 ,6070 ,6080 ,6100 :GOSUB '43(G1) :GOTO 6005 6010 GOSUB '34(275,2,1,10) :G1=X0 :GOSUB '42(X0) :GOSUB '32(274) :GOSUB 5301 :RETURN 6020 GOSUB '34(339,6,1,999999) :G2=X0 :RETURN 6030 GOSUB '34(403,5,0,99.99) :G3=X0 :RETURN 6040 GOSUB '34(467,5,0,99.99) :G4=X0 :RETURN 6045 GOSUB '34(531,2,1,12) :G5=X0 :RETURN 6050 GOSUB '34(595+64*(C-6),24,0,0) :G2\$(C-5)=X0\$:RETURN 6060 GOSUB '38(306+64*(C-11)) :STR(G3\$,1+3*(C-11),3)=X3\$:RETURN 6070 GOSUB '34(498,2,1,3) :PACK(#####)STR(G3\$,10)FROMX0 :RETURN 6080 GOSUB '34(562,2,1,14) :PACK(#####)STR(G3\$,13)FROMX0 :RETURN 6100 GOSUB '60 :SELECT PRINT 215(131) | | |

G/L070

G/L070 General Information File Maintenance

PROGRAM LISTING

G/L070

PAGE 3

```

:IF G1>0 THEN 6105
:G2$(1)="GENERAL INFORMATION"
6105 L=60
:P=0
:GOSUB '41("GENERAL INFORMATION FILE MAINTENANCE",90)
6107 PRINT "PERIOD START";TAB(18);
:GOSUB '40(STR(G3$,4))
:PRINT
6110 PRINT "PERIOD END";TAB(18);
:GOSUB '40(STR(G3$,7))
:PRINT
6115 PRINT "PAYROLL NUMBER";TAB(18);
:HEXPRINT STR(G3$,12,1)
6120 PRINT "DAY NUMBER";TAB(18);
:HEXPRINT STR(G3$,15,1)
6123 IF G1=0 THEN 6200
6125 PRINT HEX(0A0A)
6130 PRINTUSING 5900 ,G1,G2,G3,G4,G5
:PRINTUSING 5910 ,G2$(1),G2$(5)
:PRINTUSING 5920 ,G2$(2),G2$(3),G2$(4)
6200 SELECT PRINT 005(64)
:RETURN

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G/L070

LINE NUMBER CROSS REFERENCE

G/L070

PAGE 1

```

5300 - 6000
5301 - 6010
5400 - 6005
5900 - 6130
5910 - 6130
5920 - 6130
6000 - 0001
6005 - 6005
6010 - 6005
6020 - 6005
6030 - 6005
6040 - 6005
6045 - 6005
6050 - 6005 6005 6005 6005 6005
6060 - 6005 6005 6005
6070 - 6005
6080 - 6005
6100 - 6005
6105 - 6100
6200 - 6123

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G/L070

G/L070 General Information File Maintenance

| | | VARIABLE CROSS REFERENCE | G/L070 | PAGE 2 |
|------------------------------|-------|---|--------|--------|
| Operation code | ===== | C - 6005 6005 6050 6050 6060 6060 | | |
| Company number | ===== | G1 - 5301 6005 6010 6100 6123 6130 | | |
| Next P/R check number | ===== | G2 - 5301 6020 6130 | | |
| G/I file | ===== | G2* () - 5301 6050 6100 6130 6130 6130 6130 | | |
| P/R overtime rate multiplier | ===== | G3 - 5301 6030 6130 | | |
| G/I file | ===== | G3* - 5310 5310 5310 5310 5310 6060 6070 6080 6107 6110 6115 6120 | | |
| P/R hourly rate | ===== | G4 - 5301 6040 6130 | | |
| Month the fiscal year ends | ===== | G5 - 5301 6045 6130 | | |
| Index | ===== | I - 5301 5301 5301 | | |
| Line counter | ===== | L - 6105 | | |
| Page counter | ===== | P - 6105 | | |
| Miscellaneous temporary | ===== | X0 - 6005 6010 6010 6020 6030 6040 6045 | | |
| Temporary | ===== | X0* - 6050 | | |
| Today's date (packed BCD) | ===== | X3* - 6060 | | |

G/L070

| | | SPECIAL FUNCTION CROSS REFERENCE | G/L070 | PAGE 3 |
|------|---|--|--------|--------|
| ' 15 | - | 5400 | | |
| ' 32 | - | 5300 6010 | | |
| ' 33 | - | 5300 | | |
| ' 34 | - | 6005 6010 6020 6030 6040 6045 6050 6070 6080 | | |
| ' 36 | - | 5301 5301 5301 5301 5301 5310 5310 5310 5310 | | |
| ' 38 | - | 6060 | | |
| ' 39 | - | 5310 | | |
| ' 40 | - | 5310 5310 6107 6110 | | |
| ' 41 | - | 6105 | | |
| ' 42 | - | 6000 6010 | | |
| ' 43 | - | 6005 | | |
| ' 60 | - | 6100 | | |

| | |
|---|--|
| Execution begins on line 6000. | 1 GOTO 6000 5 REM G/L SUBS COMMON SUBROUTINES 1/79 101 RETURN |
| Position CRT cursor to location A3 Break A3 into line and column components, and use as the print-lengths of string variables containing horizontal and vertical tab characters | 200 DIM X1\$16,X2\$64 210 DEFFN'32(A3) :X1\$,X2\$=HEX(00) :INIT(0A)STR(X1\$,2) :INIT(09)STR(X2\$,2) :A1=INT(A3/64) :A2=A3-A1*64+1 :PRINT HEX(0D01);STR(X1\$,1,A1+1); |
| Secondary entry point to the CRT cursor positioning subroutine Perform a horizontal tab without erasing tabbed-over characters. | 215 DEFFN'36(A2) :PRINT STR(X2\$,1,A2); :RETURN |
| Load and display CRT mask A1 The mask is stored in four 256 byte segments. | 240 DIM X3\$(4)64 250 DEFFN'33(A1) :LIMITS T"CRT3",A0,A2,A2 :A2=A0+(A1-1)*4 :SELECT PRINT 005(65) :PRINT HEX(01) :FOR A1=0 TO 3 :DATA LOAD BA T(A2,A2)X3\$() :PRINT STR(X3\$(1),1,64);STR(X3\$(2),1,64);STR(X3\$(3),1,64);STR(X3\$(4),1,64); :NEXT A1 :SELECT PRINT 005(64) :RETURN |
| Input numeric or alphanumeric data at cursor position X1, checking for validity as specified by X3 and X4 | 310 DIM X\$1,X0\$64 345 DEFFN'34(X1,X2,X3,X4) :SELECT PRINT 005(255) 355 GOSUB '32(X1) :X5=1 :INIT(2A)X0\$:PRINT STR(X0\$,1,X2); :X0\$=" " :GOSUB '32(X1) |
| Redefine CPU internal line length counter for CRT | 385 KEYIN X\$, 395 , 525 :GOTO 385 |
| Display a field of asterisks at the specified input location. | 395 IF X\$=HEX(0D) THEN 475 :IF X\$<>HEX(0B) THEN 430 :IF X5=1 THEN 385 :PRINT HEX(0B2A0B); :X5=X5-1 :STR(X0\$,X5,1)=" " :GOTO 385 |
| Input one character from the keyboard (no echo to CRT) Go to line 395 if a regular key was struck. Go to line 525 if a Special Function Key (SFK) was struck | 430 IF X\$=HEX(E5) THEN 355 :IF X\$<HEX(20) THEN 385 :IF X\$<HEX(5F) THEN 385 :IF X5>X2 THEN 385 :PRINT X\$; :STR(X0\$,X5,1)=X\$:X5=X5+1 :GOTO 385 |
| Check for RETURN key | 475 IF X4=0 THEN 510 :X0=0 :IF X0\$=" " THEN 480 :IF NUM(X0\$)<24 THEN 505 :CONVERT X0\$ TO X0 :IF X0<X3 THEN 505 :IF X0<=X4 THEN 510 480 IF X0<X3 THEN 505 :IF X0<=X4 THEN 510 505 GOSUB '35("OUT OF RANGE") :GOTO 355 |
| If BACKSPACE was struck, back out the last character entered, if any | 510 SELECT PRINT 005(64) :RETURN |
| Check for LINE ERASE (erases input by restarting input routine). | 525 IF VAL(X\$)>15 THEN 355 :GOSUB '15 |
| Disallow special code keys (e.g. PRINT, RUN, INDEX). | 615 DEFFN'35(X2\$) :SELECT P2 :FOR A1=1 TO 3 :PRINT HEX(0D010A0A0A);X2\$:PRINT HEX(0D010A0A0A);TAB(64) :NEXT A1 :SELECT P :RETURN |
| Check current position pointer, X2, against maximum input length count, X5 If within range, echo last input key to CRT and store in input buffer, X0\$ Otherwise, ignore last key struck. | 660 DIM X4\$64 665 DEFFN'37(X2,X3,X4,X4\$) :GOSUB '32(64) :PRINT TAB(64) :PRINT TAB(64); |
| RETURN was struck If alphanumeric data is being input, go to line 510 Otherwise, check that only numeric data is in the input buffer, and that it is within the upper and lower limits (X3, X4) | |
| Reset CPU internal line count for CRT | |
| An SFK was pressed If it was not SFK 15 ignore it SFK 15 always reloads the Menu program | |
| Flash a message on the fourth line of the CRT | |
| Display prompt message X4\$ on the second line of the CRT Input numeric or alphanumeric data on the third line of the CRT | |
| Erase any previous prompt message and entry on the second and third lines | |

| | |
|---|--|
| Call subroutine to do actual inputting of data | :GOSUB '32(64) :PRINT X4\$:GOSUB '34(128,X2,X3,X4) :X4\$=" " :RETURN |
| Input a date at CRT position A1. The date is input as six numeric digits. Limited validity checking is performed. The date is input as an alphanumeric string, converted to a numeric value, then packed into another alphanumeric string. The date is redisplayed with slashes separating month, day and year. | 670 DIM X3\$3 673 DEFFN '38(A4) :GOSUB '32(A4) :PRINT " "; :GOSUB '34(A4+2,6,0,0) :IF NUM(X0\$)<6 THEN 675 :IF STR(X0\$,1,2)<"01" THEN 675 :IF STR(X0\$,1,2)>"12" THEN 675 :IF STR(X0\$,3,2)<"01" THEN 675 :IF STR(X0\$,3,2)>"31" THEN 675 :CONVERT X0\$ TO X0 :PACK(#####)X3\$FROMX0 :GOSUB '39(A4,X3\$) :RETURN |
| Display a packed date at CRT location A1 | 675 GOSUB '35("INVALID DATE") :GOTO 670 |
| Unpack and print date with slashes between month, day, and year. | 680 DEFFN '39(A1,X0\$) :GOSUB '32(A1) 690 DEFFN '40(X0\$) :UNPACK(#####)X0\$ TO X0 |
| Print numeric date | 691 DEFFN '72(X0) :CONVERT X0 TO X0\$, (#####) :PRINT USING 695 ,X0\$;STR(X0\$,3);STR(X0\$,5); :RETURN |
| Load and unpack the General Information file data. If A1 is not zero, also load and unpack the General Information file data for company number A1. | 695 %###/###/### 700 DIM G1\$9,G2\$(5)24,G3\$24 705 DEFFN '42(A1) :DATA LOAD DC OPEN T"G/I0F010" :DATA LOAD DC G1\$,G3\$:IF A1=0 THEN 101 :DSKIP A1-1S :DATA LOAD DC G1\$,G2\$() :UNPACK(###)G1\$ TO G1 :UNPACK(#####)STR(G1\$,2) TO G2 :UNPACK(###.###)STR(G1\$,5) TO G3,G4 :UNPACK(###)STR(G1\$,9) TO G5 :RETURN |
| Pack and save General Information record for system or company data | 720 DEFFN '43(A1) :DATA LOAD DC OPEN T"G/I0F010" :DATA SAVE DC G1\$,G3\$:IF A1=0 THEN 101 :DSKIP A1-1S :PACK(###)G1\$FROMG1 :PACK(#####)STR(G1\$,2)FROMG2 :PACK(###.###)STR(G1\$,5)FROMG3,G4 :PACK(###)STR(G1\$,9)FROMG5 :DATA SAVE DC G1\$,G2\$() :RETURN |
| Subroutine to check for full printed page. If page not full, return. On full page, skip to top of next page, increment page counter and print page headings. | 820 DIM X4\$64 825 DEFFN '41(X4\$,A1) :IF L<55 THEN 101 :P=P+1 :PRINT HEX(0C);TAB((A1-LEN(G2\$(1)))/2);G2\$(1);TAB(A1);"DATE "; :GOSUB '40(G3\$) :PRINT |
| Each program using this subroutine has its own lines between 830 and 840 which print column headings | 830 PRINT TAB((A1-LEN(X4\$))/2);X4\$;TAB(A1);"PAGE";P :PRINT HEX(0A) 840 PRINT HEX(0A) |
| Reset line counter and return | :L=6 :RETURN |
| Print a "printer not ready" message on the CRT. Then print a blank line on the printer. If the printer is off, the CPU will hang, waiting for the printer to be turned on. Once the printer is on, erase the "printer not ready" message. | 1000 DEFFN '60 :PRINT HEX(0D010A0A0A);"PRINTER NOT READY"; :SELECT PRINT 215 :PRINT HEX(01) :PRINT HEX(01) :SELECT PRINT 005 :PRINT HEX(0D);TAB(63) :RETURN |
| Open keyed file | 2000 DEFFN '130(T6,T7,G2,G3,V7\$) :GOSUB '230(T6,T7,G2,G3,V7\$) :GOTO 2100 |
| Delete record from keyed file (delete key) | 2005 DEFFN '131(T6,T1\$) :GOSUB '231(T6,0,T1\$) :GOTO 2100 |
| Locate specific record in keyed file (find key) | 2010 DEFFN '132(T6,T1\$) :GOSUB '232(T6,0,T1\$) |

| | | |
|---|------|--|
| Add new record to keyed file (insert key). | 2015 | :GOTO 2100 DEFFN'133(T6,T1\$) :GOSUB '233(T6,0,T1\$,0) :GOTO 2100 |
| Find first record in keyed file (lowest key) | 2020 | DEFFN'135(T6) :GOSUB '235(T6) :GOTO 2100 |
| Find next record in keyed file (next key) | 2025 | DEFFN'137(T6) :GOSUB '237(T6) :GOTO 2100 |
| Close keyed file | 2030 | DEFFN'139(T6) :GOSUB '239(T6) |
| If file 2 was accessed (not applicable in General Ledger), save record block factor in W. | 2100 | IF T9<>1 THEN 2105 :W=Q |
| Check status of key file access | 2105 | IF Q\$="D" THEN 101 :IF Q\$="S" THEN 2110 :STOP "FILE ACCESS ERROR" :STOP :GOTO 2100 |
| | 2110 | GOSUB '35("FILE FULL - RUN REORGANIZE") :RETURN |
| Load and unpack G/L Account record | 3500 | DIM L\$42,D\$60,L1\$31,D(10) 3510 DEFFN'110(A1) :DATA LOAD DC #A1,L\$,D\$:UNPACK(#####.##)L\$ TO L1 :UNPACK(##)STR(L\$,4) TO L2,L3 :L1\$=STR(L\$,6,31) :UNPACK(##)STR(L\$,37) TO L4,L5,L6,L7,L8,L9 :UNPACK(-#####.##)D\$ TO D() :RETURN |
| Peck and save G/L Account record | 3550 | DEFFN'111(A1) :PACK(#####.##)L\$ FROM L1 :PACK(##)STR(L\$,4) FROM L2,L3 :STR(L\$,6,31)=L1\$:PACK(##)STR(L\$,37) FROM L4,L5,L6,L7,L8,L9 :PACK(-#####.##)D\$ FROM D() :DATA SAVE DC #A1,L\$,D\$:RETURN |
| Unpack the next blocked G/L Posting record | 3600 | DIM G\$(16)14 3610 DEFFN'112(A1) :G7=G7+1 :IF G7<17 THEN 3620 :DATA LOAD DC #A1,G\$() :IF END THEN 101 :G7=1 |
| Load another block of G/L Posting records. | 3620 | IF STR(G\$(G7),1,1)=HEX(F0) THEN 3630 :UNPACK(#####.##)G\$(G7) TO P1 :UNPACK(##)STR(G\$(G7),4) TO P2 :UNPACK(##.##)STR(G\$(G7),5) TO P3 3625 UNPACK(#####)STR(G\$(G7),7) TO P4 :UNPACK(-#####.##)STR(G\$(G7),10) TO P5 :RETURN |
| End of file encountered | 3630 | P1=0 :RETURN |
| Pack a blocked G/L Posting record | 3650 | DIM G\$(16)14 3660 DEFFN'113(A1) :G8=G8+1 :IF G8<17 THEN 3680 :DATA SAVE DC #A1,G\$() :DATA SAVE DC #A1,END :DBACKSPACE #A1,15 :G9=G9-1 :G8=1 :INIT(00)G\$() |
| Save a full block of G/L Posting records; start another | 3680 | PACK(#####.##)G\$(G8)FROMP1 :PACK(##)STR(G\$(G8),4)FROMP2 :PACK(##.##)STR(G\$(G8),5)FROMP3 :PACK(#####)STR(G\$(G8),7)FROMP4 :PACK(-#####.##)STR(G\$(G8),10)FROMP5 :RETURN |

G/L SUBS Common Subroutines

| LINE NUMBER | CROSS REFERENCE | G/L SUBS |
|-------------|------------------------------------|----------|
| 0101 - | 0705 0720 0825 2105 3610 | |
| 0355 - | 0430 0505 0525 | |
| 0385 - | 0385 0395 0395 0430 0430 0430 0430 | |
| 0395 - | 0385 | |
| 0430 - | 0395 | |
| 0475 - | 0395 | |
| 0480 - | 0475 | |
| 0505 - | 0475 0475 0480 | |
| 0510 - | 0475 0475 0480 | |
| 0525 - | 0385 | |
| 0670 - | 0675 | |
| 0675 - | 0673 0673 0673 0673 0673 | |
| 0695 - | 0691 | |
| 2100 - | 2000 2005 2010 2015 2020 2025 2105 | |
| 2105 - | 2100 | |
| 2110 - | 2105 | |
| 3620 - | 3610 | |
| 3630 - | 3620 | |
| 3680 - | 3660 | |
| 6000 - | 0001 | |

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G / L SUBS

| | VARIABLE | CROSS REFERENCE | G/L SUBS | PAGE 2 |
|--|----------|---|----------|--------|
| Temporarily stores start sector of CRT Mask file | A0 | - 0260 0260 | | |
| Many temporary uses throughout com subs | A1 | - 0210 0210 0210 0260 0260 0260 0260 0615 0615 0680 0680 0705 | | |
| | | - 0705 0720 0720 0825 0825 0825 0830 0830 3510 3510 3550 3550 | | |
| | | - 3610 3610 3660 3660 3660 3660 | | |
| Many temporary uses throughout com subs | A2 | - 0210 0215 0215 0260 0260 0260 0260 0260 | | |
| Compound cursor position (temporary) | A3 | - 0210 0210 0210 | | |
| CRT location for data input (temporary) | A4 | - 0673 0673 0673 0673 | | |
| Account file | D\$ | - 3500 3510 3510 3550 3550 | | |
| Account file | D () | - 3500 3510 | | |
| G/L Posting file | G\$ () | - 3600 3610 3620 3620 3620 3620 3625 3625 3650 3660 3660 3680 | | |
| | | - 3680 3680 3680 3680 | | |
| Company number | G1 | - 0705 | | |
| G/L file | G1\$ | - 0700 0705 0705 0705 0705 0720 0720 0720 0720 | | |
| Next P/R check number | G2 | - 0705 | | |
| Company name and address | G2\$ () | - 0700 0705 0720 0825 0825 | | |
| Overtime rate multiplier (P/R) | G3 | - 0705 | | |
| G/L file | G3\$ | - 0700 0705 0720 0825 | | |
| G/L hourly rate (unused here) | G4 | - 0705 0720 | | |
| Month the fiscal year ends | G5 | - 0705 | | |
| Posting file blocking factor (loading) | G7 | - 3610 3610 3610 3610 3620 3620 3620 3620 3625 3625 | | |
| Posting file blocking factor (saving) | G8 | - 3660 3660 3660 3660 3680 3680 3680 3680 | | |
| Sectors remaining in Posting file | G9 | - 3660 3660 | | |
| Line counter for reports | L | - 0825 0840 | | |
| Account file | L\$ | - 3500 3510 3510 3510 3510 3510 3550 3550 3550 3550 3550 | | |
| Account number | L1 | - 3510 | | |
| Account name | L1\$ | - 3500 3510 3550 | | |
| Sub-account number | L2 | - 3510 | | |
| Account type | L3 | - 3510 3550 | | |
| Account's report type | L4 | - 3510 | | |
| Account's normal balance | L5 | - 3510 3550 | | |
| Account's total level | L6 | - 3510 3550 | | |
| Account's extra line advance | L7 | - 3510 3550 | | |
| Seles Account flag | L8 | - 3510 3550 | | |
| "Include account on special report" flag | L9 | - 3510 3550 | | |
| Page counter for reports | P | - 0825 0825 0830 | | |
| Posting account number | P1 | - 3620 3630 | | |
| Posting source code | P2 | - 3620 | | |
| Posting date (month & day) | P3 | - 3620 | | |
| Posting reference | P4 | - 3625 | | |
| Posting amount | P5 | - 3625 | | |
| Blocking factor for keyed files | Q | - 2100 | | |
| Keyed file access subroutine's execution status | Q\$ | - 2105 2105 | | |
| Keyed file access subroutine's internal use | Q2 | - 2000 2000 | | |
| Keyed file access subroutine's internal use | Q3 | - 2000 2000 | | |
| Keyed file access subroutine's key | T1\$ | - 2005 2005 2010 2010 2015 2015 | | |
| Keyed file access subroutine's file number | T6 | - 2000 2000 2005 2005 2010 2010 2015 2015 2020 2020 2025 2025 | | |
| | | - 2030 2030 | | |
| Keyed file access subroutine's internal use | T7 | - 2000 2000 | | |
| Keyed file access subroutine's file number | T9 | - 2100 | | |
| Keyed file access subroutine's file name | V7\$ | - 2000 2000 | | |
| Not used | W | - 2100 | | |
| One-character keyboard input | X\$ | - 0310 0385 0395 0395 0430 0430 0430 0430 0430 0525 | | |
| Value of numeric keyboard entry | X0 | - 0475 0475 0475 0475 0480 0480 0673 0690 0691 0691 | | |
| Value of alphanumeric keyboard entry | X0\$ | - 0310 0355 0355 0355 0395 0430 0475 0475 0475 0673 0673 0673 | | |
| | | - 0673 0673 0673 0680 0690 0690 0691 0691 0691 0691 | | |
| CRT location for keyboard entry (temporary) | X1 | - 0345 0355 0355 | | |
| Line feeds for vertical cursor positioning | X1\$ | - 0200 0210 0210 0210 | | |
| Number of characters for keyboard entry | X2 | - 0345 0355 0430 0665 0665 | | |
| Horizontal cursor positioning characters | X2\$ | - 0200 0210 0210 0215 0615 0615 | | |
| Lowest allowable numeric keyboard entry | X3 | - 0345 0475 0480 0665 0665 | | |
| Packed format of entered date | X3\$ | - 0670 0673 0673 | | |
| Used temporarily to load and display CRT mask | X3\$ () | - 0240 0260 0260 0260 0260 0260 | | |
| Type of entry; highest allowable numeric | X4 | - 0345 0475 0475 0480 0665 0665 | | |
| Miscellaneous, temporary | X4\$ | - 0660 0665 0665 0665 0820 0825 0830 0830 | | |
| Count of current characters from keyboard entry | X5 | - 0355 0395 0395 0395 0395 0430 0430 0430 0430 | | |

G / L SUBS

G/L SUBS Common Subroutines

SPECIAL FUNCTION CROSS REFERENCE G/L SUBS

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' 15 - 0525
' 32 - 0210 0355 0355 0665 0665 0673 0680
' 33 - 0260
' 34 - 0345 0665 0673
' 35 - 0505 0615 0675 2110
' 36 - 0215
' 37 - 0665
' 38 - 0673
' 39 - 0673 0680
' 40 - 0690 0825
' 41 - 0825
' 42 - 0705
' 43 - 0720
' 60 - 1000
' 72 - 0691
' 110 - 3510
' 111 - 3550
' 112 - 3610
' 113 - 3660
' 130 - 2000
' 131 - 2005
' 132 - 2010
' 133 - 2015
' 135 - 2020
' 137 - 2025
' 139 - 2030
' 230 - 2000
' 231 - 2005
' 232 - 2010
' 233 - 2015
' 235 - 2020
' 237 - 2025
' 239 - 2030
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CRTFM CRT File Maintenance

PROGRAM LISTING

CRTFM

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| | |
|--|--|
| | <pre> 5 REM CRTFM CRT FILE MAINTENANCE 100 DIM A\$(16)64 130 DIM X1\$16, X2\$64, K9\$(4)64, I\$5, I0\$40, I1\$57, I2\$40 135 INIT(0A) X1\$ 140 INIT(09) X2\$ 145 INIT(00) STR(X1\$,1,1),STR(X2\$,1,1) 150 GOTO 1000 210 DEFFN' 16(I2\$) 215 GOSUB ' 21(192,1) 220 SELECT P9 225 PRINT I2\$ 230 SELECT P0 235 RETURN 250 DEFFN' 17(A2) 255 PACK(#####) STR(I0\$,2) FROM A2 260 RETURN 330 DEFFN' 19(A1,A2,I1\$) : IF A2<>0 THEN 335 : I0\$=" " 335 GOSUB ' 21(64,2) 340 PRINT "ENTER "; I1\$ 345 INPUT I0\$: IF A2=0 THEN 385 350 IF NUM(I0\$)<16 THEN 375 355 CONVERT I0\$ TO I0 360 IF I0<A1 THEN 375 365 IF I0>A2 THEN 375 370 RETURN 375 GOSUB ' 16("INVALID...REENTER") 380 GOTO 335 385 IF LEN(I0\$)>A1 THEN 375 390 RETURN 580 DEFFN' 21(A3,A4) 585 GOSUB ' 23(A3) 595 PRINT TAB(63); 600 A4=A4-1 : IF A4=0 THEN 605 : PRINT : GOTO 595 605 GOTO 670 620 DEFFN' 22(A1) 625 CONVERT A1 TO I0\$, (#####) 630 PRINT STR(I0\$,1,2); "-"; STR(I0\$,3,2); "-"; STR(I0\$,5,2) 640 RETURN 650 DEFFN' 23(A3) 665 P3=INT(A3/64) : P4=A3-P3*64 670 PRINT HEX(01) : PRINT HEX(01); STR(X1\$,1,P3+1); STR(X2\$,1,P4+1) 680 RETURN 700 DEFFN' 90(A5) 730 K9=K9+(A5-1)*4 750 SELECT PRINT 005(65) 760 PRINT HEX(03) : FOR A5=0 TO 3 770 DATA LOAD BA T#1,(K9,K9)K9\$() 780 PRINT STR(K9\$(1),1,64); STR(K9\$(2),1,64); STR(K9\$(3),1,64); STR(K9\$(4),1,64); 785 A\$((A5*4)+1)=K9\$(1) : A\$((A5*4)+2)=K9\$(2) : A\$((A5*4)+3)=K9\$(3) : A\$((A5*4)+4)=K9\$(4) 790 NEXT A5 800 SELECT PRINT 005(64) 810 RETURN 1000 SELECT PRINT 005(64), #1 B10 1001 PRINT HEX(03) :GOSUB '19(1,0,"IF CRT MASK FILE IS ON (F)IXED OR (R)EMOVABLE") 1002 IF I0\$="R" THEN 1003 : SELECT #1310 1003 GOSUB '19(8,0,"NAME OF FILE") :F9\$=I0\$ 1004 LIMITS T#1,F9\$,K8,A3,A3 1010 DEFFN' 14 : SELECT PRINT 005(64) : PRINT HEX(03); "CRT MASK FILE MAINTENANCE" 1015 DATA LOAD DC OPEN T #1,F9\$ 1020 PRINT HEX(0A0A0A); "(0)END" 1030 PRINT "(1)INGUIRE" 1040 PRINT "(2)CHANGE-ADD-REPLACE" 1050 PRINT "(3)PRINT" </pre> |
| Display error message. | |
| Input valid numeric or elphanumeric data. If A2 equals zero, input alphanumeric end A1 equals maximum input length. Otherwise, A2 equals low limit, A1 equals high limit of numeric input. | |
| Position cursor to CRT location A3 and erase A4 lines. | |
| Position cursor to CRT locetion A3. | |
| Loed end display CRT mask A5 | |
| Open requested CRT file on unit specified. | |
| Input operation code. Use subroutine to process operation. | |

CRTFM

| | | |
|---|------|--|
| | 1060 | GOSUB '19(0,6,"OPERATION CODE") |
| | : | IF I0=0 THEN 1080 |
| | 1070 | ON I0 GOSUB 2000 , 3000 , 4000 |
| | : | GOTO 1010 |
| End program. | 1080 | DEFFN'15 |
| | : | END |
| Input first mask number to display. | 2000 | PRINT HEX(03); "CRT MASK FILE INQUIRY" |
| | 2010 | GOSUB ' 19(0,999,"FIRST MASK NUMBER") |
| Display mask, wait for keystroke, than display next mask. If E is struck, re-request operation code | 2020 | GOSUB ' 89(I0) |
| | : | I0\$=" " |
| | 2025 | IF A1<0 THEN 3320 |
| | 2030 | KEYIN I0\$, 2040 , 2030 |
| | : | GOTO 2030 |
| | 2040 | IF I0\$="E" THEN 3320 |
| | 2050 | I0=I0+1 |
| | : | GOTO 2020 |
| Input number of mask to be changed Display mask. | 3000 | PRINT HEX(03); "CRT MASK FILE CHANGE-ADD-REPLACE" |
| | : | GOSUB ' 19(3,0,"MASK NUMBER TO CHANGE (OR NEW)") |
| | 3010 | IF I0\$="NEW" THEN 3500 |
| | 3020 | CONVERT I0\$ TO I0 |
| | 3030 | GOSUB ' 89(I0) |
| | 3035 | IF A1<0 THEN 3000 |
| | 3040 | K9=K9-4 |
| Input location on mask to start changes | 3050 | GOSUB ' 19(0,1023,"LINE OR COMPOUND POSITION TO START CHANGES" |
| | : | |
| | 3055 | IF I0<16 THEN 3060 |
| | : | L=INT(I0/64) |
| | : | C=I0-L*64+1 |
| | : | L=L+1 |
| | : | GOTO 3090 |
| | 3060 | L=I0+1 |
| | 3070 | GOSUB ' 19(0,63,"COLUMN TO START CHANGES") |
| | 3080 | C=I0+1 |
| | 3090 | GOSUB ' 21(0,3) |
| Redisplay mask lines obliterated by input. | 3100 | PRINT A\$(1) |
| | : | PRINT A\$(2) |
| | : | PRINT A\$(3) |
| | 3110 | GOSUB ' 23((L-1)*64+C-1) |
| Use subroutine to make changes. If SFK struck, re-request mask location to be changed. | 3120 | FOR I=L TO 16 |
| | 3130 | GOSUB ' 40 |
| | : | IF C=-1 THEN 3050 |
| | 3140 | NEXT I |
| Save mask. | 3250 | FOR A1=0 TO 3 |
| | 3260 | K9\$(1)=A\$(A1*4+1) |
| | 3270 | K9\$(2)=A\$(A1*4+2) |
| | 3280 | K9\$(3)=A\$(A1*4+3) |
| | 3290 | K9\$(4)=A\$(A1*4+4) |
| | 3300 | DATA SAVE BA T\$#1,(K9,K9) K9\$() |
| | 3310 | NEXT A1 |
| | 3320 | RETURN |
| | 3500 | DSKIP #1, END |
| | : | LIMITS T #1, K9, K9, K9 |
| | 3510 | DSKIP #1, 45 |
| | 3520 | DATA SAVE DC #1, END |
| | : | INIT(20) A\$() |
| | : | GOTO 3050 |
| Input number of mask to be printed Make sure mask is on file, than print mask. | 4000 | PRINT HEX(03); "CRT MASK FILE PRINT" |
| | : | GOSUB ' 19(0,999,"FIRST MASK NUMBER (0 IF NONE)") |
| | : | IF I0=0 THEN 390 |
| | 4005 | F=I0 |
| | : | GOSUB '19(F,999,"LAST MASK NUMBER") |
| | : | L=I0 |
| | 4020 | FOR J=F TO L |
| | 4030 | GOSUB ' 88(J) |
| | 4040 | IF A1>=0 THEN 4075 |
| | : | I0=(A3-2)/4 |
| | 4075 | K9=K8+(J-1)*4 |
| | 4077 | IF J>I0 THEN 3320 |
| | : | SELECT PRINT 215(129) |
| | 4090 | GOSUB ' 91 |
| | 4092 | PRINT HEX(0A0A0D);HEX(09);"MASK NO.";J |
| | 4094 | PRINT HEX(0A0A0A) |
| | : | NEXT J |
| | : | SELECT PRINT 005(64) |
| | : | GOTO 4000 |
| See if mask A1 is on file. | 5000 | DEFFN' 88(A1) |
| | : | IF A1<0 THEN 5030 |
| | 5010 | LIMITS T#1,F9\$,A3, A3, A3 |
| | 5020 | IF A1<=(A3-2)/4 THEN 5040 |
| | 5030 | A1=-1 |
| | 5040 | RETURN |

CRTFM CRT File Maintenance

| | PROGRAM LISTING | CRTFM | PAGE 3 |
|---|---|-------|--------|
| If mask A1 is on file, load and display it | 5050 DEFFN' 89(A1) 5060 GOSUB ' 88(A1) 5070 IF A1<0 THEN 5090 5080 GOSUB ' 90(A1) 5090 RETURN | | |
| Input one line of CRT mask. | 5100 DEFFN' 40 5110 SELECT PRINT 005(255) 5120 FOR J=C TO 64 | | |
| Input one character | 5130 KEYIN A\$,5150 , 5140 : GOTO 5130 | | |
| If any SFK struck, get new change location. | 5140 C=-1 : RETURN | | |
| If RETURN struck, go to start of next line. | 5150 IF A\$=HEX(0D) THEN 5204 5160 IF A\$=HEX(CC) THEN 5220 | | |
| If PI (π) struck, end changes for this mask | 5165 IF A\$=HEX(C7) THEN 5250 5170 IF A\$=HEX(C3) THEN 5200 | | |
| If COS(struck, move up 1 line. | 5180 IF A\$=HEX(08) THEN 5230 5185 IF A\$=HEX(A0) THEN 5245 | | |
| If SIN(struck, drop down 1 line. | 5190 STR(A\$(I),J,1)=A\$: PRINT STR(A\$(I),J,1); 5195 NEXT J | | |
| If BACKSPACE struck, back cursor up one space | : GOTO 5204 5200 C=J :PRINT HEX(0A); :GOTO 5205 | | |
| If PRINT struck, advance cursor one space (no erasure). | 5204 C=1 :PRINT 5205 IF I=16 THEN 5210 5210 SELECT PRINT 005(64) : RETURN | | |
| Any other keystroke causes changes to mask. | 5220 I=17 : GOTO 5210 5230 IF J=1 THEN 5130 : PRINT HEX(08); 5240 J=J-1 : GOTO 5130 5245 PRINT HEX(09); :GOTO 5195 5250 IF I=1 THEN 5130 :I=I-2 :PRINT HEX(0C); :C=J :RETURN | | |
| Load and print CRT mask | 5255 DEFFN' 91 5260 FOR A1=0 TO 3 5270 DATA LOAD BA T#1,(K9,K9)K9\$() 5280 FOR A2=1 TO 4 : PRINT K9\$(A2) : NEXT A2 5290 NEXT A1 : RETURN 5300 PRINT STR(K9\$(1),1,64); : PRINT STR(K9\$(3),1,64); K9\$(4) 5310 GOTO 5290 | | |

CRTFM

| LINE NUMBER | CROSS REFERENCE | CRTFM | PAGE 1 |
|-------------|---------------------|-------|--------|
| 0335 - | 0330 0380 | | |
| 0375 - | 0350 0360 0365 0385 | | |
| 0385 - | 0345 | | |
| 0390 - | 4000 | | |
| 0595 - | 0600 | | |
| 0605 - | 0600 | | |
| 0670 - | 0605 | | |
| 1000 - | 0150 | | |
| 1003 - | 1002 | | |
| 1010 - | 1070 | | |
| 1080 - | 1060 | | |
| 2000 - | 1070 | | |
| 2020 - | 2050 | | |
| 2030 - | 2030 2030 | | |
| 2040 - | 2030 | | |
| 3000 - | 1070 3035 | | |
| 3050 - | 3130 3520 | | |

3060 - 3055
 3090 - 3055
 3320 - 2025 2040 4077
 3500 - 3010
 4000 - 1070 4094
 4075 - 4040
 5030 - 5000
 5040 - 5020
 5090 - 5070
 5130 - 5130 5230 5240 5250
 5140 - 5130
 5150 - 5130
 5195 - 5245
 5200 - 5170
 5204 - 5150 5195
 5205 - 5200
 5210 - 5205 5220
 5220 - 5160
 5230 - 5180
 5245 - 5185
 5250 - 5165
 5790 - 5810

CRTFM

| | | VARIABLE CROSS REFERENCE | | | | CRTFM | | | | PAGE 2 | | | |
|--|-------|--------------------------|---|------|------|-------|------|------|------|--------|------|------|----------------|
| Keyboard entry | ===== | A\$ | - | 5130 | 5150 | 5160 | 5165 | 5170 | 5180 | 5185 | 5190 | | |
| Entire 16-line mask | ===== | A\$() | - | 0100 | 0785 | 0785 | 0785 | 0785 | 3100 | 3100 | 3100 | 3260 | 3270 3280 3290 |
| | | | | 3520 | 5190 | 5190 | | | | | | | |
| Miscellaneous, temporary | ===== | A1 | - | 0330 | 0360 | 0385 | 0620 | 0625 | 2025 | 3035 | 3250 | 3260 | 3270 3280 3290 |
| | | | | 3310 | 4040 | 5000 | 5000 | 5020 | 5030 | 5050 | 5060 | 5070 | 5080 5260 5790 |
| Miscellaneous, temporary | ===== | A2 | - | 0250 | 0330 | 0330 | 0345 | 0365 | 5780 | 5780 | 5780 | | |
| Miscellaneous, temporary | ===== | A3 | - | 0580 | 0585 | 0650 | 0665 | 0665 | 1004 | 1004 | 4040 | 5010 | 5010 5010 5020 |
| Number of CRT lines to erase | ===== | A4 | - | 0580 | 0600 | 0600 | 0600 | | | | | | |
| Mask number to display | ===== | A5 | - | 0700 | 0730 | 0760 | 0785 | 0785 | 0785 | 0785 | 0790 | | |
| Column to start mask changes in | ===== | C | - | 3055 | 3080 | 3110 | 3130 | 5120 | 5140 | 5200 | 5204 | 5250 | |
| Start of mask print range | ===== | F | - | 4005 | 4005 | 4020 | | | | | | | |
| Mask file name | ===== | F9\$ | - | 1003 | 1004 | 1015 | 5010 | | | | | | |
| Index | ===== | I | - | 3120 | 3140 | 5190 | 5190 | 5205 | 5220 | 5250 | 5250 | 5250 | |
| Not used | ===== | I\$ | - | 0130 | | | | | | | | | |
| Numeric keyboard entry | ===== | I0 | - | 0355 | 0360 | 0365 | 1060 | 1070 | 2020 | 2050 | 2050 | 3020 | 3030 3055 3055 |
| | | | | 3055 | 3060 | 3080 | 4000 | 4005 | 4005 | 4040 | 4077 | | |
| Alphanumeric keyboard entry | ===== | I0\$ | - | 0130 | 0255 | 0330 | 0345 | 0350 | 0355 | 0385 | 0625 | 0630 | 0630 0630 1002 |
| | | | | 1000 | 2020 | 2020 | 2040 | 2010 | 2020 | | | | |
| Prompt message | ===== | I1\$ | - | 0130 | 0330 | 0340 | | | | | | | |
| Bulletin | ===== | I2\$ | - | 0130 | 0210 | 0225 | | | | | | | |
| Index | ===== | J | - | 4020 | 4030 | 4075 | 4077 | 4092 | 4094 | 5120 | 5190 | 5190 | 5195 5200 5230 |
| | | | | 5240 | 5240 | 5250 | | | | | | | |
| Start address of CRT Mask file | ===== | K8 | - | 0730 | 1004 | 4075 | | | | | | | |
| Next sector of current mask | ===== | K9 | - | 0730 | 0770 | 0770 | 3040 | 3040 | 3300 | 3300 | 3500 | 3500 | 3500 4075 5270 |
| | | | | 5270 | | | | | | | | | |
| Mask load/save buffer | ===== | K9\$() | - | 0130 | 0770 | 0780 | 0780 | 0780 | 0780 | 0785 | 0785 | 0785 | 0785 3260 3270 |
| | | | | 3280 | 3290 | 3300 | 5270 | 5780 | 5800 | 5800 | 5800 | | |
| Line to make mask changes on | ===== | L | - | 3055 | 3055 | 3055 | 3055 | 3060 | 3110 | 3120 | 4005 | 4020 | |
| Cursor column position | ===== | P3 | - | 0665 | 0665 | 0670 | | | | | | | |
| Cursor line position | ===== | P4 | - | 0665 | 0670 | | | | | | | | |
| Line feeds for vertical cursor positioning | ===== | X1\$ | - | 0130 | 0135 | 0145 | 0670 | | | | | | |
| Horizontal cursor positioning characters | ===== | X2\$ | - | 0130 | 0140 | 0145 | 0670 | | | | | | |

CRTFM

SPECIAL FUNCTION CROSS REFERENCE CRTFM

PAGE 3

' 14 - 1010
 ' 15 - 1080
 ' 16 - 0210 0375
 ' 17 - 0250
 ' 19 - 0330 1001 1003 1060 2010 3000 3050 3070 4000 4005
 ' 21 - 0215 0335 0580 3090
 ' 22 - 0620
 ' 23 - 0585 0650 3110
 ' 40 - 3130 5100
 ' 88 - 4030 5000 5060
 ' 89 - 2020 3030 5050
 ' 90 - 0700 5080
 ' 91 - 4090 5255

Conversions of Osborne & Associates' Payroll with Cost Accounting, Accounts Payable and Accounts Receivable, and General Ledger are being made so the programs are ready to run on many popular systems. Programs are also being offered on a variety of media — floppy disk, cassette, hard disk, etc. Independent consultants and businesses are marketing their own conversions. For a copy of a current list of conversions, fill out the form below and mail it to Osborne & Associates (a photocopy of the form will do). Remember, names are constantly being added to this list, so if you don't find what you need at first, you may want to request another list at a later date.

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name

street

citystatezip

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name

street

city

state

zip

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